1947

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Louisiana Tech University

Louisiana Polytechnic Institute Bulletin

CATALOGUE

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LOUISIANA POLYTECHNIC INSTITUTE

CATALOGUE

FOR

1947-48

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COLLEGE CALENDAR, 1947-48

First Semester

Dormitories Open for Freshmen	September 7
Dormitories Open for Upperclassmen	September 9
Freshman Orientation	September 8, 10, 11
Freshman Registration	September 9
Upperclassman Registration	September 10, 11
Classes Begin	September 12
Thanksgiving Vacation Begins	4:00 P.M. November 26
Thanksgiving Vacation Ends	8:00 A.M. December 1
Christmas Vacation Begins	12:00 Noon December 20
Christmas Vacation Ends	8:00 A.M. January 5
Semester Ends	January 21

Second Semester

Registration	January 26
Classes Begin	January 27
Easter Vacation Begins	12:00 Noon March 25
Easter Vacation Ends	8:00 A.M. March 30
Semester Ends	May 26

Summer Term

Registration	May 31
Term Ends	July 31

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Helen Woodard, B.A., M.A. (1938) ..... *Director of Department of Placement and Services*

*Dates indicate first connection with faculty of Louisiana Polytechnic Institute.

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Katherine Butler, M.A. (1931-43) (1944-) ..... *Assistant Director of Placement and Service*
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Sidney B. Wallace (1943) ..... *Acting Assistant Printer*

SECRETARIAL-CLERICAL STAFF

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Mildred Alden, B.S. (1944) (1946-) ..... *Typist Clerk, Student Employment Office*

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Annie Mae Bradley, B.S. (1943) ..... *Clerk, Registrar's Office*

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J. E. Edwards (1940) ..... *Stock Clerk, Buildings and Grounds Department*

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Nell Ruth Howe, B.S. (1944) (1946-) ..... *Stenographer-Clerk, School of Education*

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Lucille Lewis, B.S. (1943) ..... *Clerk, Buildings and Grounds Department*

Mildred K. Neal, (1946) ..... *Stenographer-Clerk, A. E. Phillips Elementary School*

Louise C. Neal, B.A. (1945) ..... *Stenographer-Clerk, Registrar's Office*

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Elinore E. Shirey (1946) ..... *Stenographer-Clerk, Business Manager's Office*

Barbara M. Smith, B.S. (1945) (1947 ..... *Stenographer-Clerk, Forestry Department*

Margaret B. Spiess, B.A. (1946) ..... *Typist-Clerk, Dining Hall*

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Lubie Sutton, B.A. (1944) ..... *Account-Clerk, Auditor's Office*

June B. Young, B.S. (1946) ..... *Stenographer-Clerk, Music Department*

OFFICERS OF INSTRUCTION

HEADS OF DEPARTMENTS

AGRICULTURE:

Frank Horsfall, Jr.—B.A., University of Arkansas, M.A., Ph.D., University of Missouri. (1946)

ART:

F. Elizabeth Bethea—B. Design, H. Sophie Newcomb College; M.A., Columbia University. (1926)

BOTANY:

M. H. Folk, Jr.—B.S., Clemson College; M.S., Louisiana State University. (1926)

BUSINESS ADMINISTRATION:

Burton R. Risinger—B.A., Louisiana Polytechnic Institute; M.B.A., Louisiana State University. (1945)

CHEMISTRY:

G. Carroll Hilman—B.S., Louisiana State University; M.S., Ph.D., University of Iowa. (1926)

ECONOMICS:

Paul Hendershot—B.A., Henderson State Teachers College; M.B.A., Louisiana State University. (1947)

EDUCATION:

George W. Bond—B.S., University of Arkansas; M.A., University of Chicago; Ed.D., Columbia University. (1924-1936) (1945-)

ENGINEERING, Chemical:

Woodrow W. Chew—B.S., New Mexico A. and M.; M.S., Oklahoma A. and M. (1940)

ENGINEERING, Civil:

Reginald A. McFarland—B.S., M.S., Louisiana State University. (1926)

ENGINEERING, Electrical:

Harley Joseph Nethken—B.S., Highland Park College; M.S., Iowa State College. (1925)

ENGINEERING, Mechanical:

William L. Mitchell—B.S., M.E., Alabama Polytechnic Institute. (1915)

ENGLISH AND FOREIGN LANGUAGES:

Herbert L. Hughes—B.A., Transylvania College; M.A., Columbia University; Ph.D., University of Virginia. (1931)

HEADS OF DEPARTMENTS (CONTINUED)

FORESTRY:

Lloyd P. Blackwell—B.A., Lynchburg College, M.S., Yale University. (1946)

HEALTH AND PHYSICAL EDUCATION FOR MEN:

George B. Hogg—B.A., Louisiana Polytechnic Institute; M.S., Louisiana State University. (1934)

HEALTH AND PHYSICAL EDUCATION FOR WOMEN:

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HOME ECONOMICS:

Alice Millet Graham—B.S., New Mexico State Teachers College; M.S., Iowa State College. (1944)

JOURNALISM:

Kenneth F. Hewins—B.A., M.A., Indiana University. (1929)

MATHEMATICS:

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MUSIC:

LaVerne E. Irvine—B.A., University of Pittsburgh; M.A., University of Pennsylvania. (1938)

PHYSICS:

Patrick D. Neilson—B.A., M.A., Vanderbilt University. (1924)

SOCIAL SCIENCE:

Garnie W. McGinty—B.A., Louisiana State Normal College; M.A., Peabody College; Ph.D., University of Texas. (1928)

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ZOOLOGY:

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PROFESSORS

Francis O. Adam, Jr., *Spanish*—B.A., William and Mary College; M.L., University of Mexico; Ph.D., University of Illinois. (1937)

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F. Elizabeth Bethea, *Art*—B. Design, H. Sophie Newcomb College; M.A., Columbia University. (1926)

Lloyd P. Blackwell, *Forestry*—B.A., Lynchburg College; M.S., Yale University. (1946)

George W. Bond, *Education*—B.S., University of Arkansas; M.A., University of Chicago; Ed.D., Columbia University. (1924-1936) (1945-)

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M. Hayne Folk, Jr., *Botany*—B.S., Clemson College; M.S., Louisiana State University. (1926)

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Lawrence J. Fox, *Sociology*—B.S., University of Georgia; M.A., Louisiana State University. (1925)

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Alice Millett Graham, *Home Economics*—B.S., New Mexico State Teachers College; M.S., Iowa State College. (1944)

Thomas A. Green, *Education*—B.A., Louisiana Polytechnic Institute; M.A., Louisiana State University. (1921)

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Kenneth F. Hewins, *Journalism*—B.A., M.A., Indiana University. (1929)

G. Carroll Hilman, *Chemistry*—B.S., Louisiana State University; M.S., Ph.D., University of Iowa. (1926)

George B. Hogg, *Physical Education*—B.A., Louisiana Polytechnic Institute; M.S., Louisiana State University. (1934)

Frank Horsfall, Jr., *Agriculture*—B.A., University of Arkansas; M.A., Ph.D., University of Missouri. (1946)

PROFESSORS (CONTINUED)

Herbert L. Hughes, *English*—B.A., Transylvania College; M.A., Columbia University; Ph.D., University of Virginia. (1931)

LaVerne E. Irvine, *Music*—B.A., University of Pittsburgh; M.A., University of Pennsylvania. (1938)

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PROFESSORS (CONTINUED)

Paul Kimbrell Smith, *Mathematics*—B.S., M.A., University of South Carolina; M.S., University of Chicago; Ph.D., University of Illinois. (1932)

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Robert L. Vining, *Education*—B.A., Louisiana Polytechnic Institute; M.A., Louisiana State University. (1936)

ASSOCIATE PROFESSORS

Francis L. Afeman, *Zoology*—B.S., Southwestern Louisiana Institute; M.S., Louisiana State University. (1934)

Joe Aillet, *Physical Education*—A.B., Southwestern Louisiana Institute; M.A., Louisiana State University. (1939)

J. H. Barnwell, *Mechanical Engineering*—B.S., Georgia School of Technology. (1941)

Ben Taylor Bogard, *Mechanical Engineering*—B.S., Louisiana Polytechnic Institute; M. S., Louisiana State University. (1937)

Marshall E. Bretz, *Music*—B.S., West Chester State Teachers College; M.S.M., Union Theological School of Music. (1944)

Alma Burk, *English*—B.I., Louisiana Polytechnic Institute; B.A., Louisiana State University; M.A., University of Iowa. (1930)

Merle Burk, *Home Economics*—B.S., Louisiana Polytechnic Institute; M.A., University of Iowa. (1932)

E. Seaton Carney, *Chemistry*—A.B., Kalamazoo College; A.M., Clark University; Ph.D., Brown University (1947)

Woodrow W. Chew, *Chemical Engineering*—B.S., New Mexico A. and M. College; M.S., Oklahoma A. and M. College. (1940)

J. Thomas Folk, *Civil Engineering*—B.S., Clemson College. (1911-1918) (1933-)

Cecil C. Crowley, *Physical Education*—B.S., Centenary College; M.A., Louisiana State University. (1940)

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John S. Green, *Agriculture* (Acting)—B.S., Louisiana State University; M.S., Texas A. & M. College. (1941-46) (1947)

ASSOCIATE PROFESSORS (CONTINUED)

Doris Burd Haskell, *Music*—New England Conservatory of Music; B.M., M.M., Chicago Conservatory of Music. (1926)

Charles G. Hobgood, *Agriculture*—B.S., M.S., Louisiana State University. (1941)

T. W. Ray Johnson, *Chemistry*—B.S., Louisiana Polytechnic Institute; M.S., Louisiana State University. (1938)

Grady E. Jones, *Mathematics*—B.I., B.S., Louisiana Polytechnic Institute; M.A., George Peabody College. (1938)

Robert M. Lightfoot, Jr., *Library Science*—B.S., North Carolina State College; M.S., University of Virginia; B.L.S., Syracuse University. (1946)

O. C. Miller, *Economics*—B.S., Ohio Northern University; B.S., M.A., M.Ed., George Peabody College for Teachers. (1944)

James W. Mize, *Physical Education*—B.S., Louisiana Polytechnic Institute; M.E., Louisiana State University. (1946)

Mary W. Moffet,*Art*—B. Design, H. Sophie Newcomb College; M.A., Columbia University. (1928)

Robert H. Mount, *Education*—B.A., Louisiana College; M.A., Louisiana State University. (1939)

Dennis P. Noah, *Education*—B.A., Louisiana Polytechnic Institute; M.A., YMCA Graduate School. (1941)

Vera Alice Paul, *Speech*—B.A., Coe College; M.A., University of Iowa. (1937)

Ernest J. Russell, *Forestry*—B.A., Louisiana Polytechnic Institute; M.F., Louisiana State University. (1947)

Ernest J. Scheerer, *Library Science*—B.A., Miami University; B.S., (L.S.), University of Illinois; M.A., University of Cincinnati; M.S., (L.S.), University of Illinois. (1938)

*Charles Hooper Smith, *Chemistry*—B.S., Louisiana Polytechnic Institute; M.S., Louisiana State University. (1940)

Eugenia H. Smith, *French*—B.A., University of Texas; M.A., Southern Methodist University. (1928)

Frellsen F. Smith, *English*—B.A., Louisiana Polytechnic Institute; M.A., University of Texas. (1938)

James A. Smith, *Music*—B.S., Michigan State Normal College; M.M., University of Michigan. (1935)

*On leave for study.

ASSOCIATE PROFESSORS (CONTINUED)

M. Louise Smith, *Art*—B.S., George Peabody College; M.A., Columbia University. (1938)

Harold Smolinski, *Accounting*—B.A., Louisiana State Normal College; M.B.A., Louisiana State University. (1941)

Lorimer E. Storey, *Social Sciences*—B.A., Louisiana State Normal College; M.A., Louisiana State University. (1945)

Mildred F. Walker, *English*—B.A., Cornell College; M.A., Columbia University. (1929)

Calvin T. Watts, *Civil Engineering*—B.S., Louisiana Polytechnic Institute. (1939)

Scott M. Weathersby, *Zoology*—B.A., Louisiana College; M.S., Louisiana State University. (1938)

Eunice Coon Williamson, *English*—B.A., Louisiana State University; M.A., Tulane University. (1926)

Robert S. Wynn, *Electrical Engineering*—B.E., Tulane University; M.A., University of Arkansas. (1927)

ASSISTANT PROFESSORS

Alfred Ameen, *Electrical Engineering*—B.S., Georgia Institute of Technology. (1946)

Authur G. Bailey, *Physics*—B.S., Mount Allison University; M.S., Dalhousie University. (1946)

H. Ben Batchelor, *Mechanical Engineering*—B.S., Louisiana Polytechnic Institute; M.S., University of Oklahoma. (1946)

Wilma Baugh, *Speech*—B.S., Missouri State Teachers College; M.A., Northwestern University. (1946)

Albert N. Baxter, Jr., *Mechanical Engineering*—B.S., California Institute of Technology. (1946)

Earl D. Bennett, *Accounting*—B.A., John Brown University. (1947)

E. W. Carswell, *Journalism*—B.A., Louisiana Polytechnic Institute. (1947)

Agnes Chambless, *Home Economics*—B.S., Louisiana Polytechnic Institute; M.S., Louisiana State University. (1944)

Edith M. Cotton, *Music*—B.A., University of Minnesota; M.A., Northwestern University. (1943)

Thomas M. DeRouen, *Agriculture*—B.S., Louisiana State University; M.S., Texas A. and M. College. (1946)

ASSISTANT PROFESSORS (CONTINUED)

Winnie D. Evans, *English*—B.A., Louisiana Polytechnic Institute; M.A., George Peabody College. (1927)

M. Frances Fletcher, *English*—B.A., Louisiana Polytechnic Institute; M.A., University of Virginia. (1940)

Willie Fletcher, *Home Economics*—B.S., Louisiana Polytechnic Institute; M.S., Iowa State College. (1942)

Thomas S. Ford, *Botany*—B.S., Louisiana Polytechnic Institute. (1946)

Lilian H. Fowler, *Zoology* (Acting)—B.S., Louisiana State University; M.S., University of Chicago. (1947)

Stella Whaley Garrison, *Physical Education* (Acting)—A.B., Asbury College; M.A., George Peabody College. (1944)

Hollis C. Hearne, *Mathematics* (Acting)—B.S., Louisiana Polytechnic Institute. (1946)

H. L Henry, Jr., *Mechanical Engineering*—B.S., Louisiana Polytechnic Institute; M.S., Illinois Institute of Technology. (1946)

*Wallace Herbert, *Mathematics*—B.S., Ouachita College; M.S., Louisiana State University. (1942)

Frank Earl Hogan, *Civil Engineering*—B.S., Louisiana Polytechnic Institute. (1946)

Linna T. Hunt, *Music*—B.M., University School of Music (Nebraska); M.M., DePaul University. (1942)

Pauline Jimerson, *Mathematics* (Acting)—A.B., Hendrix College. (1946)

Stella Booles Kidd, *Music*—Cincinnati Conservatory of Music; New York School of Music; Judson College; B.S., Keatchie College. (1919)

Kermit Knighton, *Accounting*—B.A., Louisiana Polytechnic Institute. (1940)

Marjorie C. Leigh, *Library Science*—B.S., George Peabody College; B.A. (L.S.), Emory University; M.A., George Peabody College. (1927)

Fairy C. McBride, *Secretarial Science and Business Administration*—B.A., Louisiana Polytechnic Institute. (1933)

Robert W. Mondy, *History*—B.A., Louisiana Polytechnic Institute; M.A., University of Texas. (1936)

Frances L. Munson, *Library Science*—B.A., West Texas State Teachers College; B.S., University of Illinois; M.S., Columbia University. (1945)

*On leave for study.

ASSISTANT PROFESSORS (CONTINUED)

Jack L. Norman, *Music*—B.M.E., Phillips University. (1946)

Gladys Peck, *Business Administration and Secretarial Science*—B.A., Southwestern Louisiana Institute; M.A., Louisiana State University. (1946)

Bess Crider Penick, *English* (Acting)—B.A., University of Maryland. (1946)

Richard M. Pullig, *Zoology*—B.S., Louisiana Polytechnic Institute; M.S., Louisiana State University; M.T., Gradwohl School of Laboratory Technique. (1939)

Minnie Elizabeth Ratliff,*Physical Education*—B.S., Florida State College for Women. (1944)

Ruth Richardson, *Home Economics*—B.A., Louisiana State Normal College; M.S., Louisiana State University. (1938)

Frances White Sachs, *Mathematics* (Acting)—A.B., Randolph-Macon Women's College; M.A., Columbia University. (1929)

Robert Orren Sutton, *Mathematics* (Acting)—B.A., Louisiana Polytechnic Institute; M.A., Louisiana State University. (1943)

Kathleen DeCou Thain, *French and Spanish*—B.A., Baylor University; M.A., University of Texas. (1936)

Oren Trout, *History*—B.A., Louisiana Polytechnic Institute; M.A., Louisiana State University. (1947)

Huey Williamson, *Physical Education*—B.S., Louisiana Polytechnic Institute. (1946)

Edna Yarbrough, *Physical Education*—B.S., Texas State College for Women. (1946)

INSTRUCTORS

Flora May Cunningham, *Critique; Elementary Education*—B.S., M.A., George Peabody College. (1925)

Christine C. Ellis, *Secretarial Science*—B.S., Louisiana Polytechnic Institute. (1945) (1946)

Bengamin F. Grafton, *Chemistry*—B.S., Louisiana Polytechnic Institute. (1947)

Bonnie Jean E. Hickman, *Physical Education*—B.S., Texas State College for Women. (1945)

Jimmie Lee Huitt, *Chemistry*—B.S., Louisiana Polytechnic Institute. (1947)

Mary B. Jarrell, *Critique; Elementary Education*—B.S., M.A., George Peabidy College. (1937)

INSTRUCTORS (CONTINUED)

Bessie Joyce, *Home Economics*—B.S., Louisiana Polytechnic Institute; M.A., Columbia University. (1927)

Ruth Kennedy, *Mathematics*—B.S., Louisiana Polytechnic Institute. (1947)

T. C. Kirby, *Agriculture* (Acting)—D.V.M., Texas A. & M. College. (1943) (1947)

Nancy S. McGee, *Library Science* (Acting)—B.S., Northwestern State College; B.S. (L.S.), Louisiana State University. (1947)

Hazel T. Meadows, *Secretarial Science* (Acting)—B.A., Louisiana Polytechnic Institute. (1946)

Christine H. Miller, *Critique; Elementary Education* (Acting)—B.S., Tennessee College. (1946)

Louise R. Morgan, *English* (Acting)—B.A., University of Texas, M.A., Louisiana State University. (1938) (1940) (1943) (1946)

Bernice O'Neal, *Critique; Elementary Education*—B.A., Louisiana Polytechnic Institute; M.A., Colorado State Teachers College. (1940)

Frances Maxine Pepper, *Critique; Elementary Education*—B.S., Delta State Teachers College; Ed.M., Boston University School of Education. (1944)

Eileen Phelps, *Speech*, (Acting)—B.A., Louisiana State University. (1946)

Lorraine Ponder, *Home Economics in Elementary Education*—B.S., Louisiana Polytechnic Institute. (1946)

Leola Rodgers, *Critique; Elementary Education*—BS., M.A., George Peabody College. (1926)

Irene Tolliver, *Home Economics*—B.S., Iowa State University; M.S., Kansas State College. (1938-1942) (1945-)

Thesta Walker, *Library Science, Elementary Education*—A.B., Centenary College of Louisiana; B.S. (L.S.), Louisiana State University. (1944) (1946-)

Cora Ethel Washburn, *Critique; Elementary Education*—B.S., George Peabody College; M.A., Columbia University. (1925)

Ellen G. Wilhite, *Secretarial Science* (Acting)—B.S., Louisiana Polytechnic Institute. (1946)

Yoder, Betty Smith, *English* (Acting)—B.S., Louisiana Polytechnic Institute. (1946)

COUNCILS AND COMMITTEES OF THE FACULTY FOR SESSION OF 1947-48

(The President is a member, ex-officio, of all committees)

COUNCILS

THE COUNCIL OF DEANS

(Composed of the President, the Deans of the Six Schools, and the Registrar)

President Cottingham, Chairman; Deans Gladys Beach, George W. Bond, Alice M. Graham, Frank Horsfall, Jr., Herbert L. Hughes, W. L. Mitchell, Burton R. Risinger, Roy T. Sessums; Registrar Ruby B. Pearce.

THE FACULTY COUNCIL

(Composed of the President, the Deans, the Registrar, and the Heads of Departments)

President Cottingham, Chairman; Joe Aillet, Gladys Beach, Elizabeth Bethea, L. P. Blackwell, George W. Bond, W.W. Chew, Julia Duke, J. W. Evans, M. H. Folk, Jr., J. R. Fowler, Alice M. Graham, K. F. Hewins, G. C. Hilman, G. B. Hogg, Frank Horsfall, Jr., Herbert L. Hughes, L. V. E. Irvine, A. McFarland, R. A. McFarland, G. W. McGinty, W. L. Mitchell, P. D. Neilson, H. J. Nethken, Ruby B. Pearce, B. R. Risinger, Sallie Robison, E. J. Scheerer, Roy T. Sessums, P. K. Smith, Helen Woodard, D. P. Noah.

FACULTY COMMITTEES

ATHLETICS: R. A. McFarland, Chairman; Joe Aillet, M. Hayne Folk, A. W. Ford, H. F. Schroeder, S. M. Weathersby, R. S. Wynn.

CAMPUS BEAUTIFICATION: Elizabeth Bethea, Chairman; L. P. Blackwell, Willie Fletcher, Sam Linder, H. C. Pyburn, Ruth Richardson, Helen Woodard.

CATALOGS AND COLLEGE BULLETINS: G. W. Bond, Chairman; J. W. Evans, Alice M. Graham, Frank Horsfall, Jr., Herbert L. Hughes, Ruby B. Pearce, Burton R. Risinger, Roy T. Sessums.

COMMENCEMENT: M. H. Folk, Jr., Chairman; Merle Burk, Lucille Campbell, L. V. E. Irvine, G. W. McGinty, Marry Moffett, Sallie Robison, E. M. Shirley.

DISCIPLINE: W. L. Mitchell, Chairman; Gladys Beach, G. W. Bond, Alice M. Graham, Frank Horsfall, Jr., H. L. Hughes, B. R. Risinger, Roy T. Sessums.

FACULTY ADVISER TO STUDENT SENATE: H. J. Sachs.

FACULTY COUNCIL PROGRAM: H. J. Nethken, Chairman; F. O. Adam, F. L. Afeman, L. J. Fox, A. McFarland, Ruby B. Pearce, H. E. Ruff.

FLORAL ARRANGEMENTS: Herbert L. Hughes, Chairman; Annie Mae Bradley, J. W. Evans.

LIBRARY: H. L. Hughes, Chairman; W. W. Chew, M. H. Folk, Alice M. Graham, G. C. Poret, B. R. Risinger, E. J. Scheerer.

PLACEMENT: Helen Woodard, Chairman; G. W. Bond, Alice M. Graham, Frank Horsfall, Jr., H. L. Hughes, B. R. Risinger, Roy T. Sessums.

POST-WAR PLANNING COMMITTEE: H. J. Sachs, Chairman; Alma Burk, A. W. Ford, J. R. Fowler, Mary Moffett, H. J. Nethken, G. C. Poret, H. F. Schroeder, Helen Woodard.

PROGRAMS: L. V. E. Irvine, Chairman; Elizabeth Bethea, H. L. Hughes, A. McFarland, Vera Paul, H. J. Sachs, H. F. Schroeder.

RALLY COMMITTEE: A. W. Ford, Chairman; Elizabeth Bethea, Cecil Crowley, Julia Duke, Frances Fletcher, M. H. Folk, Jr., K. F. Hewins, L. V. E. Irvine, L. P. McLane.

REGISTRATION: Ruby B. Pearce, Chairman; Gladys Beach, G. W. Bond, J. W. Evans, Alice M. Graham, Frank Horsfall, Jr., H. L. Hughes, Mabel May, W. L. Mitchell, Burton R. Risinger, Sallie Robison, Roy T. Sessums.

SOCIAL COMMITTEE: Dean of Women, Chairman; Dean of Men, Assistant Dean of Men, Representative from Inter-Fraternity Council, Representative for Pan-Hellenic Council, Non-Fraternity Senior Woman, Representative of G. I. Students, Non-Fraternity Senior Man.

STUDENT AWARDS: W. L. Mitchell, Chairman; L. W. Dixon, F. C. Gentry, T. A. Green, Mabel May.

STUDENT EMPLOYMENT: J. T. Folk, Chairman; Lucille W. Campbell, Fairy C. McBride, A. McFarland, E. M. Shirley.

STUDENT ORGANIZATIONS: G. W. McGinty, Chairman; Gladys Beach, Julia Duke, L. M. Garrison, Berry Hinton, W. L. Mitchell, Mary Moffett, Sallie Robison, H. E. Ruff.

STUDENT PUBLICATIONS: K. F. Hewins, Chairman; E. W. Carswell, J. R. Fowler, G. C. Hilman, R. A. McFarland, Henry R. Mays, P. D. Neilson.

VISUAL EDUCATION: R. H. Mount, Chairman; J. W. Evans, C. G. Hobgood, O. C. Miller, H. J. Nethken, F. F. Smith, Helen Woodard.

WELFARE OF DRIVE-IN STUDENTS: L. P. McLane, Chairman; G. E. Jones, Eugenia Smith, H. J. Smolinski, Floy VanHook, Helen Woodard.

Part II— General Information

LOCATION OF THE COLLEGE

Louisiana Polytechnic Institute is a coeducational state college, founded in 1894. It is located in the city of Ruston, which has a population of about 10,000 and is situated in the central part of northern Louisiana. Ruston is served by two railways and by two paved U. S. highways as well as several state highways.

BUILDINGS AND GROUNDS

The grounds of Louisiana Polytechnic Institute comprise a campus of fifty acres within the city of Ruston; a tract of twenty-five acres adjacent to the campus; and the demonstration farm of the School of Agriculture and Forestry consisting of 352 acres and situated just outside the city limits, about a half mile from the campus. The value of the college plant is estimated at approximately three and a half million dollars.

The college buildings (including the smaller ones) number a total of thirty-three. About half of these have been built recently, and some of the rest have been recently reconditioned. The buildings are the following:

Keeny Hall (the administration building); Howard Auditorium Building (containing also the Little Theater); Prescott Memorial Library; Bogard Hall (the engineering building); Lomax Hall (the education building); Chemistry Building; Home Economics Building; Anna Idtse Home Management House; Raymond L. Reese Agriculture Building; A. E. Phillips Elementary School.

Dining Hall; Men's Gymnasium; Women's Gymnasium; Harper Hall (the old dormitory for women); Aswell Hall (the new dormitory for women); Robison Hall (the new dormitory for men); Agriculture Dormitory (for men); Freshman Hall (for men); Sophomore Hall (for men); Football Stadium.

President's Residence; Residence of Dean of Men; Student Center Building (including the Cafeteria); Student Religious Center House.

House of Nursery School; Greenhouse; Power Plant; Shop Building; Stock-Judging Barn; Stock Barns (two in number); Dairy Barn; Potato Curing Plant.

In addition to these buildings, there are situated on the campus a baseball park, a practice football field, a hockey field, six concrete, lighted tennis courts, and ample space for the various other college sports and games.

ORGANIZATION

Louisiana Polytechnic Institute is organized into six schools: the School of Agriculture and Forestry, the School of Arts and Sciences, the School of Business Administration and Economics, the School of Education, the School of Engineering, and the School of Home Economics.

RATING

Louisiana Polytechnic Institute is an approved four-year college. It is a member of the Association of American Colleges, the Association of Colleges and Secondary Schools of the Southern States, and the American Association of Collegiate Registrars.

SESSIONS OF THE COLLEGE

Louisiana Polytechnic Institute has two sessions each year: the *main session* of nine months (in two semesters) beginning in September and ending in May; and the *summer session* of nine weeks, which begins soon after the close of the regular session and ends early in August.

DEGREES

Louisiana Polytechnic Institute confers three degrees: bachelor of arts, bachelor of science, and bachelor of music. Candidates who have specialized in a vocational or semi-professional subject are awarded a degree in that subject; for example, bachelor of science in engineering, bachelor of science in chemistry, etc. No honorary degrees are conferred.

COURSES OF INSTRUCTION

Courses in the following subjects are offered by the college: agriculture, botany, forestry (given in the School of Agriculture and Forestry); art, chemistry, English, French, history, journalism, mathematics, music, physical education, physics, political science, sociology, Spanish, speech, zoology, (given in the School of Arts and Sciences); commerce and economics (given in the School of Business Administration and Economics); education, geography, library science, psychology (given in the School of Education); chemical, civil, electrical and mechanical engineering (given in the School of Engineering); home economics, child development, and institutional management (given in the School of Home Economics).

PROVISIONS FOR VETERANS' EDUCATION

Eligibility: Any service man or woman who has served ninety (90) days or more in the Armed Service is entitled to

attend college under Public 346 or under Public 16 as the case may be.

To obtain certification for educational training, the veteran should obtain the Form 1950 for schooling under Public 346 or the Form 1900 for Public 16. This form is to be filled out and attached to a Certified copy of his discharge and mailed to the Veterans Administration office, 333 St. Charles Street, New Orleans, 12, Louisiana.

The Veterans Administration will then determine the veteran's eligibility and the number of years of schooling to which he is entitled. This certification is mailed to the Coordinator of Veterans' Affairs at Tech.

The veteran is then entitled to enter Tech as a student with all expenses paid, such as tuition, fees, cost of books and all supplies necessary to pursue his course. In addition to this the veteran, if single, receives a check for $65.00 per month; or, if married, he receives $90.00. The veteran is responsible for his room, board, and laundry expense.

Credit for work done by members of the Armed Forces while in service will be allowed as recommended by the American Council on Education in "The Guide to the Evaluation of Education Experiences in the Armed Forces."

ADMISSION REQUIREMENTS

HIGH SCHOOL REQUIREMENTS

An applicant for admission to the freshman class must have been graduated with not fewer than fifteen acceptable units from a four-year course in an accredited secondary school. The applicant should send to the office of the Registrar before a semester opens the completed application blank found in the catalogue, and a transcript of his high school credits.

For *unconditional entrance* to any of the curricula, the applicant for admission must present as a part of his high school credit the specific units indicated for admission to this curriculum.

A period termed "Freshman Week" is set aside at the beginning of the year for the purpose of acquainting freshmen with the college and getting them registered properly. All freshmen must attend the meetings during the period.

SPECIAL STUDENTS

Applicants for admission who have not had the advantage of a high school education but who are of mature age (at least twenty-one years) will be admitted as special students and will be allowed to pursue courses which they are able to take. No special student may qualify as a candidate

for a degree until he has satisfied the entrance requirements of the curriculum in which he is registered.

TRANSFER STUDENTS

A student transferring from another college must present a transcript of the work done there and a certificate of honorable dismissal. In the absence of such credentials the student may register conditionally until such credentials can be obtained. If not obtained within a reasonable time, the registration will be cancelled. A student dismissed from another institution because of academic or disciplinary difficulties will not be admitted to Louisiana Polytechnic Institute until reinstated at the institution previously attended.

A student who presents a transcript of credit from another college will be permitted to register for such courses as he seems to be prepared to take. He will be given provisional credit and class standing on the basis of the transcript which has been presented. When he has been in residence *one* years, his final credit and class standing will be determined by the quality of work he has done in this institution.

REGISTRATION

Students are required to register on days announced for registration in the college calendar.

The privilege of registering is withheld from all students who have not registered on the sixth working day after the last regular registration day of each semester. A late registration fee of $1.00 is charged for registration after classes have begun.

In registering students the heads of departments act as advisers and try to avoid errors; but the student himself is expected to know that graduation is attained through the completion of curriculum requirements as set down in the catalogue. He should know his curriculum and register according to its requirements.

Students who intend to take the degree of master of arts or master of science in a graduate school are advised to acquire a reading knowledge of French inasmuch as many graduate schools require this.

COURSE NUMBERS

Freshman courses are numbered in the 400 series; sophomore courses in the 500 series; and junior-senior courses in the 600 series. In some cases courses in the 500 series are accepted for junior-senior credit.

When there is a specific junior prerequisite for senior courses, such senior courses are numbered in the 700 series.

A "continuation" course is two or three courses that

form a sequence through successive semesters. Such courses are allowed only provisional credit until the sequence of the "continuation" course is completed.

Most courses meet three times a week for a semester and such courses assume a preparation of two hours of work for each hour of meeting. Most courses carry a credit of three semester hours. Certain courses in the sciences and in other subjects require more or less work than the amount named above and accordingly carry more or less credit. The credit for each course is indicated with the description of the course, as follows: three hours credit; two hours credit; the word "hour" meaning one semester hour.

CLASSIFICATION OF STUDENTS

FRESHMAN. A student who has fewer hours than are required for sophomore standing in his curriculum.

SOPHOMORE. A student whose total credit is not less than the freshman requirement of the curriculum in which he is registered, and who has quality points equivalent to or above the number of hours earned. The major portion of his credits must be in specific freshman requirements.

JUNIOR. A student who has completed the specific freshman and sophomore requirements of his curriculum, and who has quality points equivalent to or above the total number of hours he has earned.

SENIOR. A student who lacks that number of semester hours normally required during the last two semesters of his curriculum, and who has quality points equivalent to or above the total number of semester hours he has earned.

When a student changes from one school or curriculum to another, his class standing will be determined by the application of his credits to the school or curriculum to which he has changed.

STUDENT LOAD

No student may be registered for fewer than 12 hours except in the case of a last semester senior, who may be allowed to carry only the courses required for graduation, and certain other cases approved by the dean of the school in which he is registered.

The *normal load* for a student per semester is that amount required in his classification in the curriculum in which he is registered. However, in exceptional cases only, a student who has maintained a general average of *B* and who has no grade below *C* for the preceding semester may add three hours more than the total required in the current semester of his curriculum, provided his total registration does not exceed 21 hours.

Drive-in students and those engaged in part-time employment should generally not schedule more than 15 semester hours.

No candidate for a degree will be considered for general honors who has been registered for fewer than 15 hours.

ADDING AND DROPPING COURSES

After the first registration for a semester a student may add a course only with the approval of the dean of his school and the head of the department. No course may be added after the sixth working day of the semester.

Under exceptional circumstances a student may drop a course with the consent of the head of his department, the dean of his school and the Registrar, provided he does not reduce his schedule below the minimum of twelve semester hours.

A student who drops a course after the first six weeks of any semester will receive the grade of *F* in that course.

CHANGING SCHOOLS OR CURRICULA

If a student wishes to change from one curriculum to another, he must have the written consent of his major professor and the dean of the school in which he is registered.

If a student wishes to change from one school to another, he must have the written consent of the deans of both schools.

GRADUATION REQUIREMENTS

The candidate for a degree is required to complete one of the curricula listed under one of the six Schools.

In case the college changes the curriculum after a student enters college, he is permitted to graduate upon completion of the requirements of his curriculum at the time he entered provided he is a candidate for a degree within eight years. If more than eight years have elapsed from the time of his entrance to the time of his reentrance, he will be allowed the semester hours credit he has earned but he must complete the requirements of his curriculum as given in the catalogue at the time of his reentrance.

Every candidate for a degree must spend his senior year in residence. A student who enters with advanced standing from another college must fulfill a minimum residence requirement of 36 weeks—two semesters or four summer sessions—and must earn at least thirty semester hours credit and an equal number of quality points.

A student who has completed three years of his requirements with no off campus study, will be allowed to earn out of residence not more than 18 hours of his last 36 to be pre-

sented for the degree, but his final semester must be spent in residence here.

Not more than one-fourth of the total amount of credit required for a degree may be earned through correspondence or off-campus extension. Twenty-seven of the last 36 hours presented for a degree must be earned in residence at the Louisiana Polytechnic Institute.

The Dean of each school will determine the requirements for the students in his school, and will outline their major and minor fields of study. Not later than the beginning of their senior year he will pass upon their qualifications as candidates for degrees.

Every junior who expects to become a candidate for a degree the following session must report that fact to the Registrar during the second semester of his junior year. At the beginning of his senior year each candidate is given a statement of the work to be completed before graduation.

All requirements of the courses of study as outlined in the college announcement or its equivalent must be certified by the Registrar before degrees will be conferred.

REPORTS TO PARENTS AND GUARDIANS

Reports of students each semester are sent to parents and guardians by the Registrar.

When a student is not doing satisfactory work at mid-term, his instructors report his deficiencies to the Dean of Men or the Dean of Women. If he is deficient in more than *one* subject, the Dean reports his deficiencies to his parent or guardian.

TRANSCRIPT OF RECORDS

A transcript of the work a student has completed in Louisiana Polytechnic Institute will be furnished upon request, provided he is not indebted to any department of the college. One transcript is issued without charge; for each additional one a fee of $1.00 is charged. No transcripts are issued during the first ten days of either semester, or the first week of the summer session.

EXPENSES

DORMITORIES FOR MEN

There are three dormitories for men: Freshman Hall, for all students who have completed less than 30 semester hours; Sophomore Hall, for students who have completed more than 30 and less than 60 semester hours; and Robinson Hall, for all students who have completed over 60 semester hours.

All students wishing to make reservations must give

their classification so as not to cause confusion and possibly lose their room reservation.

Men students living in the dormitories are expected to furnish their linens, bedspreads, cover, pillow, personal toilet articles, etc. A minimum is 4 single beds sheets, 2 pillow cases, 2 bedspreads, 12 towels and bath cloths, and sufficient blankets or cover.

DORMITORIES FOR WOMEN

There are two dormitories for women, Harper Hall and Aswell Hall. Harper Hall, the old dormitory, provides accommodations for 245 students. One section and one ward on the third floor are reserved for freshmen. Sophomores and juniors occupy the main building. Seniors are given preference for rooms in Aswell Hall, the new dormitory. Juniors having completed the highest number of hours are accepted for the remaining rooms.

Each student should bring linen and cover for a single bed, one pillow, one dresser cover, one table cover, one lamp if desired, towels and wash cloths. Curtains and spreads are more easily selected after arrival. Sash curtains of white domestic or some similar material are required for students in Harper Hall and Freshman Hall.

FEES

The *registration fee* is $10.00, payable by all students each semester upon entrance. Each student who registers for the first semester is required to pay a subscription of $5.00 entitling him to a copy of the college annual, *The Lagniappe,* issued during the second semester. Only one member in each family is required to pay for the college annual. The $5.00 includes the cost of making the student's picture for the annual.

The *graduation fee* of $10.00, payable by all students at the beginning of their last semester, includes the diploma fee, life membership in the Alumni Association, and a two-year subscription to *The Tech Talk.*

A late registration fee of $1.00 will be charged for registration at any time after classes begin.

For the laboratory courses in chemistry a *breakage fee* of $5.00 is deposited. The unused portion of this is refunded.

BOARD AND ROOM

Requests for room reservations must be made to the dean of men or the dean of women.

A *deposit* of $5.00 will be required when a room is reserved, or assigned, and will be retained until the reservation is cancelled and the room is inspected and found in good condition.

The room deposit of $5.00 will be refunded on request made not later than two weeks before the opening of the semester.

Payments for board, room and laundry may be made in advance at the time of registration, or in installments as follows, for the first term session 1947-48. (If at any time it is found necessary, board, room and laundry may be changed.)

On Registration	$33.75
Thursday, October 9, 1947	33.75
Monday, November 10, 1947	33.75
Thursday, December 11, 1947	33.75
TOTAL	$135.00

Short absences do not lessen the cost of operating the boarding department, and no deduction will be made for an absence of a week or less. For longer absences, deduction will be made for the number of days in excess of seven.

Excess laundry charges will be made according to conditions on the printed laundry slip.

Dormitory students are advised not to leave money in their rooms. Deposits may be made at the Auditor's office.

The Auditor will not approve the resignation of any student who is indebted to the college, nor will credit be given for academic work until all indebtedness has been settled.

No fee is required of students who major in music except those who take organ or harp.

The concert-lecture fee of $1.00 plus Federal Government Tax per semester, was installed, effective July 1, 1945, by a unanimous vote of the students.

Students are expected to accept the responsibility of looking after payments promptly.

In order to avoid any embarrassment to any student of Louisiana Polytechnic Institute or to the parents of any student, and to facilitate the prompt collection of college fees, the following regulation has been adopted.

(1) All other college fees for the semester and, in the case of a boarding student, at least one board payment, are to be paid at the time of registration. Any error made in the assessment of fees resulting in an overcharge will be immediately corrected by the institution. If the error results in an undercharge, it will be expected to be corrected immediately by the student or the student's parents.

(2) In the case of boarding students, who pay their board in installments, the amount of each installment is to be paid on the date shown on this page.

(3) If the board is not paid when due, seven days of

grace will be permitted to provide for the possible late arrival of checks, etc.

(4) If any installment on board is not paid within these seven days of grace, a notice will be sent to the student's parents on the eighth day, unless that is a holiday, in which case the notice will be sent on the first day after the holiday shall have expired. This notice will inform the parents that, unless the board shall have been paid by the 14th day after the beginning of the school month, the student will be suspended from college.

SUMMARY OF EXPENSES

Dormitory Students

	1st Sem.	2nd. Sem.
Registration fee, each term (payable by all students)	$ 10.00	$ 10.00
Student subscription to The Tech Talk, per term	1.00	1.00
Concert-Lecture Fee including tax, per term	1.20	1.20
College Annual subscription, (including payment for picture, payable in first term)	5.00	
Board and room in the dormitories, per term	122.85	122.85
Laundry, per term	9.00	9.00
Infirmary fee, in dormitory, per term	3.15	3.15
Music tuition, per term (for non-music majors)	15.00	15.00
Chemistry breakage deposit	5.00	
Books and supplies (average)	25.00	25 00
Graduation fee (payable at beginning of last term before graduation)	10.00	
Organ or Harp tuition—non-majors	30.00	30.00
Organ or Harp tuition—majors	15.00	15.00
Mechanical Engineering laboratory fee (Mech. Engr. 780)	7.50	7.50
Out-of-State fee*	50.00	50.00
Rental on musical instruments per semester per instrument	4.00	4.00

Other Students

	1st Sem.	2nd. Sem.
Registration fee, each term (payable by all students)	$ 10.00	$ 10.00
Student subscription to The Tech Talk, per term	1.00	1.00
College Annual subscription, (including payment for picture, payable in first term)	5.00	
Concert-Lecture Fee including tax, per term	1.20	1.20
Music tuition, per term (for non-music majors)	15.00	15.00
Chemistry breakage deposit	5.00	
Books and supplies (average)	25.00	25.00
Graduation fee (payable at beginning of last term before graduation)	10.00	
Organ or Harp tuition—non-majors	30.00	30.00
Organ or Harp tuition—majors	15.00	15 00
Out-of-State fee*	50.00	50.00
Rental on musical instruments per semester per instrument	4.00	4.00

An engineering student will need additional supplies, such as drawing set, drawing board, T square, etc., amounting to about $35.00.

* Since the fall semester, 1941, the out-of-state fee has been $50.00 per semester; however, this does not apply to students enrolled prior to September, 1941. These students will continue to pay at the rate of $24.00 per semester.

According to a resolution of the State Board of Education, an out-of-state student is defined as follows:

> A college student whose parent or guardian (legal guardian) lives in another state shall be classified as a non-resident, or out-of-state student, and this classification shall continue as long as the student is a member of the student body of a college under the control of this Board, and such student shall be required to pay the fees assessed against non-resident students. This classification of non-resident students shall govern in the case of out-of-state students twenty-one years of age or over.

It should be understood that the mere owning of real estate in Louisiana does not make one a resident of this State.

None of the registration fees are to be refunded after classes begin.

EXAMINATIONS

Examinations include *regular* and *special* examinations. *Regular examinations* are held at the end of each semester and they are required of all students. Each examination covers a period of not over three hours.

Special examinations include postponed examinations and deficiency examinations.

Special examinations are held on the third and fourth working days of each semester.

Permission to take any of these examinations must be obtained through the Registrar's office.

A student whose final examinations have been postponed must take them at the time scheduled for special examinations immediately following his registration. A student who fails to take these examinations at the prescribed time will forfeit his right to take them and will receive a grade of *F* in the course.

A candidate for graduation who fails to pass the final examination in only one course in his last semester work may be permitted to take a deficiency examination in this course. In the event that he fails the deficiency examination, he must repeat the course.

SYSTEM OF GRADING

The grade marks are divided as follows:

A: The grade of A is given for the highest degree of excellence that it is reasonable to expect of students of exceptional ability and application.

B: The grade of B is given for a superior quality of work but not of as high a quality as should be expected of students of exceptional ability.

C: The grade of C is given for average work to be expected from classes in general.

D: The grade of D is given for a quality of work that is the minimum requirement for receiving credit for the course.

F: The grade of F is given to denote failure and to indicate that the work must be repeated before credit will be given.

QUALITY POINTS

The quality of work is indicated by quality points. Quality points are assigned to the various grades for each semester hour on the following basis:

GRADE	QUALITY POINTS
A	3 (per semester hr.)
B	2 (per semester hr.)
C	1 (per semester hr.)
D, F	0

The candidate for a degree must have an average grade of at least *C* (that is, have earned an average of one point for each semester hour's credit) in (1) all work for which he has credit, and also in (2) all required courses in his curriculum. Transfer students must have at least a *C* average in all work taken at the college. The dean of the school the transfer student enters will determine the number of smester hours that may be accepted and the conditions under which they may be accepted. A student may, with the consent of the dean of his school, repeat a course for which he has a grade of *D*, in which case the new grade will be the one used in computing the quality points.

RATING OF STUDENTS

The rating of any student or any group of students is determined by dividing the number of net quality points by the number of hours of academic work for which the student or group was registered.

HONORS

By a system of class, departmental, and general honors, the college gives official recognition of attainments in scholarship.

DEPARTMENTAL HONORS

A student is graduated with departmental honors if he has complied with the following requirements:

1. Earned at least 24 hours in one department.
2. Maintained a 2.5 average in courses of that department during his junior and senior years.
3. Maintained in all courses during his junior and senior years an average of at least 1.7, and received in no course a grade below C.

GENERAL HONORS

At graduation the degree is conferred *cum laude* upon

students who have maintained an average rating of 2.2; *magna cum laude* upon those who have maintained an average of 2.6; and *summa cum laude* upon those who have maintained an average rating of 2.9 during their junior and senior years, and who have not less than a 2.00 average for their freshman and sophomore years.

To be eligible for any honors at graduation a student must have been registered for not fewer than 15 hours of work during any semester except the first semester of his freshman year and the final semester.

DEAN'S HONOR LIST

At the end of the semester the Dean of each school gives to the college press a list of the students in his school who have carried not less than fifteen semester hours approved by the dean, and have made an average of at least B (2.0), with no grade of F. This is known as the Dean's Honor List.

CONDUCT AND DISCIPLINE

Louisiana Polytechnic Institute expects every student to conduct himself in an approved manner, observing such rules and regulations as are laid down by the college. By way of enforcing these rules and regulations the college employs two kinds of probation: scholastic probation and disciplinary probation, these being under the direction of the Dean of Men and the Dean of Women but subject to the ultimate supervision of the President.

A. *Scholastic Probation.*

Scholastic probation is determined by the following schedule of cumulative arithmetical averages:

	COLUMN I	COLUMN II
One semester	0.3	0.0
Two semesters	0.4	0.2
Three semesters	0.5	0.3
Four semesters	0.6	0.4
Five semesters	0.7	0.5
Six semesters	0.8	0.6
Seven semesters	0.9	0.7
Eight or more semesters	1.0	0.8

Interpretation of above schedule:

1. A student whose point average falls below the figures in Column I is automatically placed on probation.
2. A student whose point average falls below the figures in Column II is automatically dismissed from college unless an exception is made by the faculty committee on academic deficiency.
3. A student who return to college after dismissal for

scholastic reason will be allowed two semesters to bring his average up to the point average in Column II, provided that in the first of those two semesters he makes up at least half of his quality point deficiency.

4. A student will not incur the penalty of scholastic probation or dismissal for a deficiency of a fraction of a quality point.
5. A student who is dismissed for scholastic deficiency will not be admitted the succeeding semester to any of the colleges under the supervision of the State Board of Education.
6. A student who is suspended at the end of the Spring semester will not be allowed to reenter the Summer session nor the first semester of the following session.
7. A student who has been suspended for the second time will not be allowed to reenter until the expiration of a calendar year.
8. These regulations apply to regular students; i.e., those carrying a minimum of 12 hours and to transfer students entering to Louisiana Polytechnic Institute.

The above regulations became effective at the end of the first semester 1942-43.

B. *Disciplinary Probation.*

The provisions of disciplinary probation are the following:

1. Violation of college regulations during the time of probation will cause the student to be suspended for a period to be determined by the faculty committee on discipline.
2. Initiation into any social or honorary organizations is prohibited.
3. All absence privileges are withdrawn.
4. Such a student may not run for office.
5. No student on probation may represent the college in any intercollegiate event other than in athletic contests which are governed by S.I.A.A. regulations.

OTHER REGULATIONS

"Campusing" is a measure used for the sake of discipline by the deans. A student who has disregarded regulations may be confined to the campus for a period of time designated by his or her dean; and may not be permitted to attend extra-curricular functions on the campus, such as ball games or programs given in the auditorium.

If the nature of the offense or infraction of rules seems to demand a heavier punishment, a student may be placed on "strict campus" which means that there will be no social

contact other than that necessary for carrying on class work.

If a student has been corrected during a period of "campus," the period will be extended.

Hazing is prohibited. Hazing is defined as the unauthorized entrance into the room of other students, or subjecting fellow-students to indignities of any character. Mingling with a crowd or following a crowd engaged in hazing will be considered to be participation in hazing. Mingling with a crowd, following a crowd, or attempting to gain forcible entrance to any room or building is also considered a violation of discipline.

On entering college, each student is required to subscribe to the following:

"I PLEDGE MY HONOR TO REFRAIN FROM ANY AND ALL FORMS OF HAZING AND TO RESPECT AND OBEY ALL RULES AND REGULATIONS OF THE FACULTY."

No social function shall be scheduled by any body of students without permission of the Dean of Women, with whom arrangements must be made.

Women students who expect to board in town will be required to consult the Dean of Women before they are allowed to register. *Only junior and senior women* may board in town without special permission.

Any change of address must be reported at once to the Registrar and to the Dean of Men or Dean of Women.

CLASS ATTENDANCE

1. Regular attendance on classes is expected of all students.
2. If for any reason a student is absent from classes, his absences will be recorded by the instructor and when such absences in any course have reached the number specified below, the instructor will report in writing the name of the student and the dates of such absences to the Dean of Men or the Dean of Women.

Course with one (1) hour of recitation or laboratory period per week	2 absences
Course with two (2) hours of recitation or laboratory periods per week	4 absences
Course with three (3) hours of recitation or laboratory periods per week	5 absences

2. An absence from class immediately preceding or following a recess or vacation or following a trip as a member of a college organization will be counted a double absence.
4. When a test or special exercise has been announced for a definite time, the student must be present for this test or exercise. Absences at this time will be excused by the Dean of Men or the Dean of Women only in emergencies, such as, the illness of the student, or death or critical ill-

ness in the immediate family. Where the student resides in the dormitory, confirmation of illness must be given by the supervisor of the infirmary. These excuses are to be presented to the teacher within one week after the student returns to school. Whether or not the absence is excusable, the student is held accountable for the work he has missed.

5. The total number of absences per semester in any class, regardless of the cause of such absences, may not exceed three times the number of class meetings per week without causing the student to fail the course; except that where a student carried 15 hours or more and earned a "B" or better average the preceding semester the number of absences may not exceed four times the number of class meetings per week.
6. When the instructor reports a student for absences as indicated in paragraph II, he will continue to report all subsequent absences of this student from this class. When the total number of absences reported for any class has exceeded the number specified in the paragraph V, the office of the appropriate dean will notify the Registrar's Office of this fact, and the student will be given a grade of "F" in this course. The dean will also notify the student to discontinue attending this class and notify the instructor to drop the student from his rolls. Should the dropping of a course for the above cause result in the student's carrying less than the minimum number of hours prescribed the student will be dropped from the college. In cases where excessive absences result in the failure of the lecture or laboratory portion of lecture-laboratory course, the student will be considered as having failed the entire course.
7. In a case where excessive absences have cause a student to be dropped from the college and where he believes that extenuating circumstances exist, he may appeal his case to the discipline committee.

EXCUSES

A student will not be excused for an unauthorized absence. A student who has an authorized absence from a class must obtain a written excuse from the Dean of Men or Dean of Women and present it to his instructor within one week from the time he reports back to class. If he fails to do this, the absence will be recorded as unauthorized.

CHEATING

Students are expected to be honest in all their college work. Any student found guilty of cheating will, if it is his

first offense, be reported in writing by his instructor to the Dean of Men, or the Dean of Women. This report will be filed in the dean's office, and the student will be required to drop the course in which the offense occurred and to receive a failing grade in that course. If such a student is reported again for cheating, the dean will report him to the Discipline Committee. If he is found to be guilty of having cheated a *second time,* he will be expelled from the college.

Cheating is defined as dishonesty in class work, such as giving or receiving forbidden aid on written or oral examinations; failure to indicate by quotation marks, footnotes, etc. the source of material used in class papers; handing in as one's own papers or other work prepared by another student or other persons, etc.

HONORABLE DISMISSAL

The term "Honorable Dismissal" is used to refer to conduct and character only. An Honorable Dismissal is never given unless the student's standing as to moral conduct and character is such as to entitle him to continuance in the college. Furthermore, in every transcript of the student's record full mention is made as to the cause of withdrawal.

CAMPUS PRIVILEGE

A student who has resigned or who has been suspended or expelled must leave the campus within twenty-four hours after severing his relation with the institution.

FINANCIAL AID

STUDENT EMPLOYMENT

Opportunity is given to a limited number of students to earn board and lodging, but all students are required to pay the registration, library, laboratory, and infirmary fees. Only those students whose scholarship is satisfactory will be given employment by Louisiana Polytechnic Institute.

SCHOLARSHIPS, LOANS, ETC.

A scholarship exempting the student from the payment of registration fees is granted annually to a graduate of each state-approved high school of Louisiana ranking in the highest one-fourth of his class.

The George O. Thatcher Memorial Loan Fund was established in 1925 by a gift of two hundred dollars from Mrs. W. F. Pearce. The fund is maintained by the Alumni Association, and all life membership fees become a part of the loan fund. The sum of fifteen hundred dollars of this fund has been used as loans to students recommended by the

President of the College and the Thatcher Memorial Loan Fund Committee.

The Pierian Club of Ruston maintains a loan fund for women students who are recommended by the President of the College and the Education Committee of the Club. This loan fund was established in 1910 and has been maintained without interruption since that time.

The Ruston Branch of the American Association of University Women maintains a loan fund which is available to senior women students.

GUIDANCE

It is the desire of the administration of Louisiana Polytechnic Institute that each student receive individual treatment. To this end the Office of Guidance was established. Advisers are eager to meet with all students and to discuss with them whatever problems arise that are related to their well-being while in residence in the college.

Students will find this counseling service particularly valuable at the time of registration. The advisers will aid in interpreting the rules and regulations as found in the catalogue and T-Book, in describing the courses which are being offered, and in arranging a program of classes in keeping with each student's needs and opportunities.

Students who enter the college with advanced standing from other colleges will find it definitely to their advantage to secure the guidance of an adviser in adapting the educational offerings of this college.

There are many other phases of the student's life which have a definite bearing on his educational well-being and which at times constitute problems which may be most easily solved through the friendly counsel and advice of those faculty representatives.

Students may expect to derive greatest benefits from the educational opportunities afforded by the college when they intelligently seek and follow the advice which the educational counselors give them.

ORIENTATION

A course required of all first semester freshmen except engineers. The purpose of the course is fourfold: First, to provide a time in which to gather information from the freshman which is necessary for proper guidance. Second, to acquaint the student with the aims, purposes, organization and regulations of the college. Third, to help the student to evaluate his own study habits, to recognize his weaknesses and to strengthen his good habits. Fourth, to lead the student to understand the bases for human adjustments. Credit, one hour.

STUDENT ORGANIZATIONS

DEPARTMENTAL CLUBS

Biology Club, Business Administration and Economics Club, Engineering Association, Freshman Players, Health and Physical Education Club, Home Economics Club, Louisiana Tech Speakers Bureau, Philharmonic Society, "T" Club, Teachers Club, Tech Theater Players.

GENERAL ORGANIZATIONS

Amvets, Student Union, Theta Beta Club (commuting women students), Student Senate, Women's League (association of all women students), Girls' Intra-Mural Sports Board, Campus Women's Council.

HONORARY CLUBS

Blue Jackets, International Relations Club.

HONORARY SCHOLASTIC FRATERNITIES AND CLUBS

Delta Alpha Rho (engineering). Demeter, Gamma Epsilon, Los Hispanofilos, Mu Alpha Theta, National Collegiate Players, Sigma Tau Delta (national English fraternity), Sigma Delta Pi (ntional Spanish fraternity).

MUSIC ORGANIZATIONS

Band o'Glee (women), Freshman Girls' Glee Club, Tech Choir, The Tech Band, The Tech Symphony Orchestra, Men's Glee Club, The Tech Collegians.

RELIGIOUS ORGANIZATIONS

Baptist Student Union, Newman Club, Wesley Foundation, Student Christian Association, Westminister Club.

SERVICE ORGANIZATION

Alpha Phi Omega.

SOCIAL ORGANIZATIONS

Councils: Interfraternity, Panhellenic.

Men's Fraternities: Alpha Omega, Kappa Sigma, Lambda Chi Alpha, Pi Kappa Alpha.

Women's Fraternities: Alpha Chi Omega, Kappa Delta, Phi Mu, Sigma Kappa, Theta Upsilon.

STUDENT PUBLICATIONS

The student publications are *The Tech Talk,* the weekly newspaper; *The Lagniappe,* the college annual.

ATHLETICS AND PHYSICAL TRAINING

All phases of athletics for men are encouraged: football baseball, basketball, track, tennis, volleyball, hockey, soccer, fieldball, boxing, and wrestling. The college has, on the main campus, adequate facilities for conducting these forms of physical training, including a football field, baseball diamond, practice fields, a quarter-mile track with two-hundred-twenty yard straightaway, and tennis courts, as well as separate gymnasiums for men and women in which are conducted physical training exercises, basketball, and other sports.

Intercollegiate contests in the major athletic sports are participated in by men of the college. The college is a member of the Southern Intercollegiate Athletic Association. Over-emphasis, however, is not placed upon representation upon the college teams, and students are urged to engage in other forms of physical training and are required to pursue courses in physical education.

Intercollegiate contests in athletics for women are dis-

couraged. All women students are urged to take part in some form of athletics and are required to take physical education.

Medical examinations at the beginning of the year determine the type of exercise each student takes. Those not able to take part in the major sports are required to engage in minor activities, such as quoits, croquet, and hiking.

All candidates for athletic teams must adhere strictly to the rules and regulations of the Southern Intercollegiate Athletic Association. The general regulations of the college apply to athletes as well as to other students.

PLACEMENT AND SERVICE

The Department of Placement and Service is a service department. Its duties, responsibilities, and activities have to do with the graduates getting and holding positions and with the Institution rendering service to the area. One of the major functions is to assist the graduating senior in securing the best position for which he is qualified. This work is done in cooperation with the Schools of the College and is intended to supplement rather than duplicate the efforts of the various deans.

The office contacts various business concerns in order to inform the employer of available qualified seniors, and of graduates seeking promotion. A record of the personal history, the scholastic rating, and individual evaluations which is confidential and cumulative is kept on file. The dossier is available for examination by employers and interviews are arranged for potential employees. After the graduate has been placed, the department follows up to see if the employer is satisfied with the individual's work and if the graduate is happy in his position. Each alumnus is requested to keep the office notified of his address and the position he holds in order that the roster which is kept may be active. From these files data are available for the college and other interested parties.

The department serves the campus by operating ditto and mimeograph machines. Also, included in the service is the maintenance and distribution of State and Government films for the public schools of Louisiana.

PUBLIC RELATIONS

In order to render the best possible service to its constituency, it is necessary that Louisiana Polytechnic Institute be kept aware of the needs in its area, and just as necessary that the public be informed concerning the services which the institution is rendering or is prepared to render.

To accomplish this two-fold end a Department of Public Relations has been set up. The Director of the Department will spend much time in the field. An effort will be made

to visit Alumni, business and professional men, school people, and prospective students.

The work of the Department will succeed, almost in direct proportion to the use made of its facilities by the public.

This Department is not to be confused with the Publicity Department which supervises the publication of The Tech Talk, the Lagniappe, and the release of news to the press.

MISELLANEOUS

AWARDS AND PRIZES

Epsilon Gamma chapter (of Kappa Sigma) award for most valuable Journalism student.

Louisiana State University graduate scholarship; awarded annually.

Tulane University graduate scholarship; awarded annually.

Award of Head of English Department for most outstanding English major in graduating class.

CHURCHES

Ruston has the following churches: First Baptist, Temple Baptist, Church of Christ, Church of God, Episcopalian, Methodist, Presbyterian, and Roman Catholic.

LECTURES AND CONCERTS

As a part of its educational program, Louisiana Polytechnic Institute and the Louisiana Tech Concert Association bring to the campus each year noted writers, scholars, lecturers and entertainers as well as famous musical and dramatic organizations. On printed ballots, by unanimous vote the student body decreed that beginning July 1, 1945, an assessment be levied of $1.20 each semester and $.60 for the summer session (including twenty per cent government tax) for the use of the Louisiana Tech Concert Association. All of the money collected, except the government tax, goes into an annual budget for talent which is spent during the course of the budget year on whatever outstanding attractions are available, whenever they are available.

Because the amount collected each year from the students is insufficient to cover the actual cost of providing a superior series of educational and cultural attractions, the Institution contributes a substantial amount to subsidize the cost for students. The series is also supported by the faculty, townspeople and hundreds of citizens of North Louisiana and Southern Arkansas who pay $6 per year (tax included). Admission on a Tech Student Ticket is therefore limited to the student to whom issued and to the period during which the student is regularly enrolled in the Institution. For rather obvious reasons the Louisiana Tech Concert Association cannot refund the concert lecture fee when a student resigns or leaves the Institution for some other reason.

Part III — The Schools; Curricula; Courses

SCHOOL OF AGRICULTURE AND FORESTRY

FRANK HORSFALL, JR., Dean

The School of Agriculture and Forestry is composed of the departments of Agriculture, Botany, and Forestry. Curricula are offered leading to bachelor of science degrees in each of these fields. On the succeeding pages detailed statements of the courses and divisions will be found.

CURRICULUM FOR GENERAL COURSE IN AGRICULTURE

(LEADING TO B. S. IN AGRICULTURE)

FRESHMAN YEAR	Semester Hours	
English 401, 402: Freshman Composition	6	
Botany 402: General Botany	4	
Botany 430: Plant Anatomy	4	
Mathematics 405, 406: General Mathematics	6	
Animal Husbandry 401, 402: Livestock Judging	6	
Agronomy 401: Forage Crops	3	
Physical Education 401, 402	2	
Orientation 401	1	
Total semester hours		32

SOPHOMORE YEAR	Semester Hours	
Chemistry 401, 402: General Inorganic Chemistry	8	
Agronomy 501: Field Crops	3	
Animal Husbandry 503: Animal Nutrition	3	
Dairy Husbandry 504: Farm Dairying	3	
Forestry 503, 504: Farm Forestry	6	
Horticulture 401: General Horticulture	3	
Horticulture 550: Vegetable Gardening	3	
Horticulture 551: Fruit Growing	3	
Physical Education 501, 502	2	
Total semester hours		34

JUNIOR YEAR	Semester Hours	
Animal Husbandry 506: Poultry Production	3	
English 502: American Literature	3	
Dairying 601: General Dairy Laboratory Work	3	
Animal Husbandry 601: Beef Cattle Production	3	
Animal Husbandry 602: Swine Production	3	
Horticulture 601: Elementary Landscaping	3	
Zoology 511: Entomology or Injurious Insects	4	
Chemistry 620: Agriculture Chemistry	3	
Physics 503: Physics for Agriculture Students	3	
Economics 501: General Economics	3	
Agronomy 601: Soils and Fertilizers	4	
Electives	3	
Total semester hours		38

SENIOR YEAR	Semester Hours
Animal Husbandry 604: Breeding and Improvement of Live Stock	3
Animal Husbandry 701: Farm Meats	3
Animal Husbandry 702: Diseases of Animals	3
Botany 630: Diseases of Plants	3
Accounting 401: Farm Bookkeeping	3
Agronomy 703: Soil Conservation and Management	3
Economics 620: Agriculture Economics	3
Economics 629: Farm Marketing	3
Agronomy 702: Farm Management	3
Agronomy 752: Farm Machinery	3
Sociology 610: Rural Sociology	3
Electives	3
Total semester hours	36
TOTAL hours for graduation	140

Note: Electives in the junior and senior year are to be chosen with the approval of the faculty advisers from the following groups: social science, English, journalism, chemistry, education, mathematics, geography. A maximum of two semester hours in music may be applied as an elective toward graduation.

CURRICULUM FOR MAJORS IN AGRONOMY

(LEADING TO B. S. IN AGRICULTURE)

Freshman and sophomore years are the same as for the general curriculum.

JUNIOR YEAR	Semester Hours
Agronomy 601: Soils	4
Animal Husbandry 506: Poultry Production	3
Agronomy 605: Cotton	3
Zoology 403: Bacteriology	4
Botany 520: Plant Physiology	4
Zoology 610: Genetics	3
Chemistry 605: Qualitative	3
Economics 501: Principles of Economics	3
Agronomy 752: Farm Machinery	3
Physics 503: Physics for Agriculture Students	3
English 502: American Literature	3
Total semester hours	36

SENIOR YEAR	Semester Hours
Agronomy 701: Soil Fertility	4
Agronomy 702: Farm Management	3
Agronomy 703: Soil Conservation and Management	3
Agronomy 705: Plant Breeding	3
Botany 521: Taxonomy	3
Botany 630: Plant Diseases	3
Chemistry 620: Agriculture Analysis	3
Speech 410: Principles of Speech	3
Electives*	13
Total semester hours	38
TOTAL hours for graduation	140

*Electives to be chosen according to instructions shown for the students in the general course in agriculture.

BOTANY CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

FRESHMAN YEAR	Semester Hours	
Orientation	1	
English 401, 402	6	
History 501, 502	6	
Botany 402, 430	7	
Physical Education	2	
Mathematics 401, 402 or 405, 406	6	
Total semester hours		28

SOPHOMORE YEAR	Semester Hours	
Speech 410, English 502	6	
Political Science 501, Psychology 501	6	
Economics 501, 502	6	
Chemistry 401, 402	9	
Botany 531, 521	6	
Physical Education	2	
Total semester hours		35

JUNIOR AND SENIOR YEARS	Semester Hours	
Botany, sufficient to make a total for the four years of	30	
Minor subjects, enough to make a total for the four years of	21	
Physics 505, 506 or 507, 508	6	
Electives enough to bring total for curriculum to	130	
TOTAL semester hours in curriculum		130

*See also under Botany Department.

CURRICULUM FOR MAJORS IN DAIRY HUSBANDRY

(LEADING TO B. S. IN AGRICULTURE)

During the freshman and sophomore years students majoring in dairying will follow the same curriculum as given in the general course in agriculture.

JUNIOR YEAR	Semester Hours	
Animal Husbandry 506: Poultry Production	3	
English 502: American Literature	3	
Dairy Husbandry 601: Dairy Laboratory	3	
Animal Husbandry 602: Swine Production	3	
Zoology 403: Bacteriology	4	
Zoology 610: Genetics	3	
Economics 501: General Economics	3	
Dairy Husbandry 602: Advanced Dairy Judging	3	
Chemistry 620: Agricultural Analysis	3	
Agronomy 601: Soils and Fertilizers	4	
Dairy Husbandry 604: Dairy Practicums	2	
Electives*	3	
Total semester hours		37

SENIOR YEAR	Semester Hours	
Animal Husbandry 604: Animal Breeding	3	
Animal Husbandry 702: Diseases of Animals	3	
Botany 630: Diseases of Plants	3	
Accounting 401: Farm Accounting	3	
Economics 620: Agriculture Economics	3	
Economics 629: Farm Marketing	3	
Sociology 610: Rural Sociology	3	
Dairy Husbandry 703: Dairy Manufactures	3	
Dairy Husbandry 704: Advanced Dairy Problems	3	
Dairy Husbandry 705: Dairy Seminar	3	
Dairy Husbandry 706: Dairy Practicums	2	
Electives*	6	
Total semester hours		38
TOTAL hours for graduation		141

*Electives to be chosen according to instructions shown for the students in the general course in agriculture.

CURRICULUM FOR MAJORS IN HORTICULTURE

(LEADING TO B. S. IN AGRICULTURE)

During the freshman and sophomore years students majoring in horticulture will follow the same curriculum as given in the general course in Agriculture.

JUNIOR YEAR	Semester Hours	
Horticulture 601: Elementary Landscaping	3	
Horticulture 603: Small Fruit and Nut Culture	3	
Horticulture 605: Systematic Pomology	3	
English 502: American Literature	3	
Zoology 511: Economic Entomology	3	
Agronomy 601: Soils and Fertilizers	3	
Economics 620: Agriculture Economics	3	
Chemistry 620: Agriculture Analysis	3	
Botany 520: Plant Anatomy and Physiology	3	
Botany 630: Diseases of Plants	3	
Electives*	3	
Total semester hours		33

SENIOR YEAR	Semester Hours	
Horticulture 701: Commercial Fruit Production	3	
Horticulture 703: Insects and Diseases of Fruit and Vegetables	3	
Horticulture 705: Advanced Landscaping	3	
Horticulture 707: Advanced Vegetable Problems	3	
Horticulture 709: Nursery Practices	2	
Horticulture 711: Seminar	2	
Zoology 610: Genetics	3	
Agronomy 702: Farm Management	3	
Agronomy 703: Soil Conservation and Management	3	
Electives*	12	
Total semester hours		37
TOTAL hours for graduation		140

*Electives to be chosen according to instructions shown for the students in the general course in agriculture.

GENERAL FORESTRY CURRICULUM

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

FRESHMAN YEAR	Semester Hours	
Agronomy 401, 501	6	
Botany 402, 430	7	
English 401, 402	6	
Horticulture 401	3	
Mathematics 401, 402	6	
Orientation 401	1	
Physical Education	2	
Total semester hours		31

SOPHOMORE YEAR	Semester Hours	
Animal Husbandry 401	3	
Botany 521	3	
Chemistry 401, 402	8	
Economics 501	3	
English 603	3	
Forestry 501: General Forestry	3	
Forestry 502: Forest Protection	3	
Forestry 531: Dendrology (see Botany 531)	3	
Physical Education	2	
Total semester hours		31

JUNIOR YEAR	Semester Hours	
Animal Husbandry 603	3	
Botany 520	3	
Engineering 451	2	
Forestry 601, 602: Applied Forestry	6	
Forestry 532: Plant Ecology (see Botany 532)	3	
Forestry 512: Forest Entomology (see Zoology 512)	3	
Forestry 603: Forest Soils	4	
Forestry 635: Plant Propagation (see Botany 635)	3	
Physics 504	3	
Speech 410	3	
Total semester hours		33

JUNIOR YEAR (Summer Camp)	Semester Hours	
Forestry 641: Plane Surveying (See Civil Engineering 641f)	3	
Forestry 605: Forest Engineering	3	
Forestry 607: Forest Mensuration	4	
Total semester hours		10

SENIOR YEAR	Semester Hours	
Agronomy 702	3	
Engineering 610	2	
Forestry 604: Forest Soils	4	
Forestry 701, 702: Forest Management	6	
Forestry 703: Forest Finance	3	
Forestry 705, 706: Forest Utilization	6	
Forestry 631: Forest Pathology (see Botany 631)	3	
Electives	8	
Total semester hours		35
TOTAL hours for graduation		140

ACADEMIC FORESTRY CURRICULUM

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

FRESHMAN YEAR	Semester Hours	
Botany 402, 430	7	
English 401, 402	6	
History 501, 502 or 6 hrs. in Modern Foreign Language	6	
Mathematics 401, 402	6	
Orientation 401	1	
Physical Education	2	
Total semester hours		28

SOPHOMORE YEAR	Semester Hours	
Botany 520, 521	6	
Chemistry 401, 402	8	
Forestry 501: General Forestry	3	
Forestry 502: Forest Protection	3	
Forestry 531: Dendrology (see Botany 531)	3	
Political Science 501	3	
Psychology 501	3	
Speech 410	3	
Physical Education	2	
Total semester hours		34

JUNIOR YEAR	Semester Hours	
Economics 501	3	
Engineering 451	2	
Engineering 610	2	
English 603	3	
Forestry 601, 602: Applied Forestry	6	
Forestry 532: Plant Ecology (see Botany 532)	3	
Forestry 512: Forest Entomology (see Zoology 512)	3	
Forestry 635: Plant Propagation (see Botany 635)	3	
Physics 504	3	
Electives	6	
Total semester hours		34

JUNIOR YEAR (Summer Camp)	Semester Hours	
Forestry 641: Plane Surveying (see Civil Engineering 641f)	3	
Forestry 605: Forest Engineering	3	
Forestry 607: Forest Mensuration	4	
Total semester hours		10

SENIOR YEAR	Semester Hours	
Botany 630	3	
Forestry 603: Forest Soils	4	
Forestry 701, 702: Forest Management	6	
Forestry 703: Forest Finance	3	
Forestry 705, 706: Forest Utilization	6	
Forestry 631: Forest Pathology (see Botany 631)	3	
Electives	12	
Total semester hours		34
TOTAL hours for graduation		140

Department of Agriculture

FRANK HORSFALL, JR., PROFESSOR AND HEAD OF THE DEPARTMENT
ASSOCIATE PROFESSOR C. B. HOBGOOD; ASSISTANT PROFESSOR
T. M. DEROUEN

The courses in agriculture at Louisiana Polytechnic Institute have been organized and developed during the last few years with special consideration for the needs of three or four hundred boys living in Northern Louisiana, who desire to pursue the study of agriculture and who, for one reason or another, would not attend institutions at a distance from their homes.

Curricula for a four-year course in general agriculture, and a major in horticulture, or agronomy, or dairy husbandry or animal husbandry, or in agriculture with a minor in education have been set up, each of these curricula leading to the degree of bachelor of science in agriculture.

FACILITIES

Excellent facilities for its teaching have been provided during recent years. The college now has available for its use about three hundred and fifty acreas of land, part of which lies within the city limits of Ruston and near the college campus. Modern buildings and other equipment for carrying on general farming and livestock and dairy farming in Northern Louisiana are in use.

A herd of about one hundred pure-bred Jersey and Holstein cattle is maintained to furnish laboratory material for teaching and to provide dairy products for use on the campus. Likewise, herds of swine and beef cattle are kept. The United States Soil Conservation Service maintains practical demonstrations in all of its phases of soil and water control, land use, and reforestation on the college farm. The development of orchards and gardens is now under way by the Horticulture department.

A new two-story brick and concrete building for exclusive use in teaching agriculture is now in use on the college farm. Excellent laboratories have been supplied for teaching agronomy, horticulture, dairying, and animal husbandry. The dairy laboratory and creamery have modern equipment for pasteurizing, cooling and bottling milk, and production of butter, ice cream, and other dairy products. The work required in producing these, and carried out chiefly by students, affords excellent laboratory practice along with the teaching of these subjects. Facilities for farm butchering and curing meats on a small scale are provided.

DESCRIPTION OF COURSES

ANIMAL HUSBANDRY 401: *A Study of Types and Breeds of Farm Animals and Livestock Judging.* Three hours. One lecture, four laboratory hours.

A study of the origin, native home, adaptability, distribution, and market value of the more important types and breeds of domestic livestock.

ANIMAL HUSBANDRY 402: *A continuation of Animal Husbandry 401.*

ANIMAL HUSBANDRY 503: *Animal Nutrition.* Three hours lecture. Prerequisite, Chemistry 401, parallel Chemistry 402.

The principles of animal nutrition; the composition and digestibility of feedstuffs; the selection of feeds; balancing rations, and the economical feeding of animals for various purposes.

ANIMAL HUSBANDRY 506: *Poultry Production.*

The feeding, breeding, care and management of the farm poultry flock; the use of incubators and brooders; poultry selection, marketing and judging. General problems involved in poultry growing.

ANIMAL HUSBANDRY 601: *Beef Cattle Production.* Three hours lecture. Prerequisites, Animal Husbandry 401, 402.

The principles of care and management, breeding, feeding and market values of beef cattle as pertaining to Louisiana and Southern conditions will be studied.

ANIMAL HUSBANDRY 602: *Swine Production.* Three hours lecture. Prerequisites, Animal Husbandry 401, 402.

A study of the breeding, feeding, management and market values of swine under Louisiana conditions will be considered.

ANIMAL HUSBANDRY 604: *Animal Breeding.* Three hours. Prerequisites, Biology 401, 402.

An introduction to the study of the physiology of reproduction of farm animals with special emphasis on breeding and improvement of livestock. Fertility, sterility, reproductive efficiency, artificial insemination, and systems of breeding will be studied.

ANIMAL HUSBANDRY 701: *Farm Meats.* Three hours. Prerequisites, Animal Husbandry 401, 402, 603.

The home meat supply. General problems in producing and slaughtering animals for use in the home or community. Proper methods of handling animals for slaughter; killing and dressing animals. Curing of meat products, sausage making; a study of the various cuts and their economical uses.

ANIMAL HUSBANDRY 702: *Diseases of Animals.* Three hours. Prerequisites, junior standing or consent of the instructor.

A study of the common infectious and non-infectious diseases of farm animals, sanitation, diagnosis, prevention, treatment.

AGRONOMY 401: *Forage and Pasture Crops.* Three hours. Three hours lecture per week.

The growth, distribution, culture and uses of forage and pasture crops with special attention to those adapted to the South.

AGRONOMY 501: *Southern Field Crops.* Three hours. Three hours lecture per week.

The characteristics, adaptation, cultural requirements, harvesting and storage of field crops in the U.S., primarily the South.

AGRONOMY 601: *Soils.* Four hours. Prerequisites, Chemistry 407, 408. Three hours lecture and two hours laboratory per week.

Fundamental principles of soil science and the relation of soil properties to plant growth.

AGRONOMY 605: *Cotton.* Three hours. Prerequisite, Agronomy 501. Three hours of lecture per week.

A general survey of the production methods, marketing and uses of cotton.

AGRONOMY 701: *Soil Fertility.* Four hours. Prerequisite, junior standing or the consent of the instructor.

This course deals with various factors having to do with the maintaining and improvement of soil fertility.

AGRONOMY 702: *Farm Management.* Three hours. Prerequisite, senior standing. Three hours of lecture per week.

The methods of farming adapted to southern conditions; selecting the farm; the organization and development of the farming system and farm records.

AGRONOMY 703: *Soil Conservation and Management.* Three hours. Prerequisite, junior standing or consent of the instructor.

This course deals with the causes and control of soil and water losses and the uses of crop rotations in the control of erosion and maintenance of soil productivity.

AGRONOMY 752: *Farm Machinery.* Three hours. Prerequisite, consent of instructor. Two hours lecture and two hours laboratory per week.

The construction, adjustment, operation and repair of various types of farm machinery, for seeding, tillage and harvesting. Displays and handling of modern farm machinery.

DAIRY HUSBANDRY 504: *Farm Dairying.* Three hours. Prerequisites, Animal Husbandry 401, 402. Three hours lecture per week.

DAIRY HUSBANDRY 601: *A Laboratory Course in Dairy Products.* Four hours laboratory, one hour lecture.

Babcock testing of milk and milk products; use of the lactometer; standardizing; use of separators; methods of cream raising; various tests for cleanliness of milk; methods of producing and handling milk; proper care of milk utensils.

DAIRY HUSBANDRY 602: *Advanced Dairy Judging.* One lecture, four hours laboratory. Prerequisites, Animal Husbandry 401, 402.

DAIRY HUSBANDRY 604: *Dairy Practicums.* Four hours laboratory. Prerequisites, junior standing, or consent of instructor.

The course consists of actual practical work carried on in the dairy barns, laboratories and milk houses. The student majoring in dairying will be required to have the practical experience in milk production and in the care and handling of milk from the cow through the pasteurizing, cooling. and bottling of milk.

HORTICULTURE 401: *General Elementary Horticulture.* Three hours. Two lectures and one laboratory.

A study of the different phases of horticulture, plant propagation and care, and an introduction to fruit and vegetable growing.

HORTICULTURE 550: *Vegetable Growing.* Three hours, one lecture and two laboratories. Prerequisite, Horticulture 401.

Planning, planting, and equipping the farm garden. Fertilizing, spraying, marketing. Use of hotbeds and coldframes. Practical experience in growing vegetables.

HORTICULTURE 551: *Fruit Growing.* Three hours, two lectures and one laboratory. Prerequisite, Horticulture 401.

Problems of location, planting, cultivation, pruning and harvesting; control of disease and insects.

HORTICULTURE 601: *Elementary Landscaping.* Three hours, one lecture and two laboratories. Prerequisite, Horticulture 401.

A study of plant material, principles of design and planning the home grounds. Actual landscaping of the home.

HORTICULTURE 603: *Small Fruit and Nut Culture.* Three hours, two lectures, one laboratory. Prerequisites, Horticulture 401 and 551.

A study of the requirements of the various small fruits and nuts, locations, planting, cultivating, control of disease and insects, and harvesting.

Courses not described above will be offered in subsequent years as the need for them develops. These include Agronomy 701, Soil Fertility; Agronomy 705, Plant Breeding; Dairy Husbandry 703, Dairy Manufactures; Dairy Husbandry 704, Advanced Dairy Problems; Dairy Husbandry 705, Dairy Seminar; Dairy Husbandry 706, Dairy Practicums; Horticulture 605, Systematic Pomology; Horticulture 701, Commercial Fruit Production; Horticulture 703, Insects and Diseases of Fruits and Vegetables; Horticulture 705, Advanced Landscaping; Horticulture 707, Advanced Vegetable Problems; Horticulture 709, Nursery Practice, and Horticulture 711, Seminar.

Department of Botany

M. H. FOLK, JR., PROFESSOR AND HEAD OF THE DEPARTMENT
ASSOCIATE PROFESSOR FRED R. CLARK, ASSISTANT PROFESSOR THOMAS S. FORD

Courses are offered in the Department of Botany to meet the needs of those students who wish to study Botany as a cultural elective as well as those who wish to elect Botany as their required science. As Botany is the basic science for students going into the applied botanical fields of Agronomy, Forestry and Horticulture, the department emphasizes those phases of plant science which are foundational for Agriculture and Forestry. The degree of Bachelor of Science in Botany is granted to students who complete the outlined work as indicated in the four-year curriculum in Botany.

Students desiring a major in Botany are required to take thirty semester hours in Botany. (With the permission of the head of the department, certain courses in Agronomy, Forestry and Horticulture may be counted toward the major in Botany.) Students who choose Botany as their major should consult the head of the department concerning their minor subjects before the end of their sophomore year. The minor subjects are to be selected from some related department, and the requirement for a minor in that department must be met.

Students doing work toward a major in other departments and electing Botany as a minor are required to take twenty-one semester hours in Botany, the courses to be chosen in consultation with the Head of the Botany Department.

DESCRIPTION OF COURSES

BOTANY 402: *General Botany.* Four hours.

This course is designed to give a general knowledge of the elementary facts and fundamental principles of botany, which includes the physiology, anatomy, morphology, life history and inheritance of plants. Prerequisite to all other courses offered by this department. Three hours lecture and three hours laboratory per week.

BOTANY 403: *Bacteriology.* Three hours. Prerequisite, Botany 402.

The purpose of this course is to present the phases of bacteriology that will be of most importance to the teacher of home economics and have an important relation to home life. Two hours lecture and three hours laboratory per week. (This couse is open to other than home economics students, with permission of the instructor.)

BOTANY 430: *Plant Anatomy.* Three hours. Prerequisite, Botany 402.

A comparative study and interpretation of the structure of root, stem and leaf of the vascular plants. Economic plants will be used as much as possible. Two hours lecture and three hours laboratory per week.

BOTANY 520: *Plant Physiology.* Three hours. Prerequisite, Botany 402.

A study of plant tissues, plant structures, their functions, and the life processes of plants. Two hours lecture and three hours laboratory per week.

BOTANY 521: *Taxonomy of Flowering Plants.* Three hours. Prerequisite Botany 402.

The principles of classification and nomenclature and their application to selected plant groups. Also, a study of the relations of plants to each other and to their environment. One hour lecture and six hours laboratory per week.

BOTANY 531: *Dendrology.* Three hours. Prerequisite, Botany 402.

Nomenclature, classification and indentification of woody plants with special reference to species indigenous to southern United States and other important forest regions of temperate North America. Two hours lecture and three hours laboratory per week.

BOTANY 532: *Plant Ecology.* Three hours. Prerequisite, Botany 531 or Botany 520.

The study of plants in relation to their environment and of the principal plant associations, with special emphasis on the principal forest types of the world and their geographical distribution. Two hours lecture and three hours laboratory per week.

BOTANY 630: *Plant Pathology — Diseases of Plants.* Three hours. Prerequisite, Botany 402.

A general study of plant diseases, with special consideration given to the more important diseases of the cultivated plants. Three hours lecture.

BOTANY 631: *Forest Pathology.* Three hours. Prerequisite, Botany 531.

A survey is made of the important diseases of forest trees, including a consideration of causes, prevention and control of such diseases. Two hours lecture and three hours laboratory per week.

BOTANY 635: *Plant Propagation.* Three hours. Prerequisite, Botany 520.

A study of the principles and methods involved in the propagation of woody and herbaceous plants by seeds, division, layers, cuttings, budding and grafting. Two hours lecture and three hours laboratory per week.

Department of Forestry

LLOYD P. BLACKWELL, PROFESSOR AND HEAD OF THE DEPARTMENT
ASSOCIATE PROFESSOR ERNEST J. RUSSELL

In order that the students graduating from Louisiana Polytechnic Institute might be better fitted into the land-use and the related industrial program of North Louisiana and South Arkansas which is nearly 70 per cent forested, the School of Agriculture was reorganized and expanded into the School of Agriculture and Forestry. Classes in Forestry were begun on 4 March 1946.

The forestry curriculum is divided into three divisions:

1. A major in forestry is offered under a broad general forestry program which will fit a student to work in a land-use or related industrial program, federal, state, industrial, or private.

2. Another major in forestry is offered under an academic-forestry program which will fit a student specifically for graduate work and the obtaining of a master's degree in forestry.

3. A one-year farm-forestry course is offered which is required of all students registered in the Department of Agriculture so that they may become well grounded in the principles and application of correct forest practices on farm woodlands.

DESCRIPTION OF COURSES

FORESTRY 501: *General Forestry.* Three hours. Two hours lecture, two hours laboratory.

An introduction to forestry.

Laboratory work includes visits to nearby forest areas for a general survey of all types of forest work going on in the North Louisiana and South Arkansas area.

FORESTRY 502: *Forest Protection.* Three hours. Two hours lecture, two hours laboratory. Prerequisite, Forestry 501.

The principles and application underlying the forest protection problem with special emphasis on forest fires.

Laboratory work includes visits to nearby forest areas for a study of forest damage and the application of practical methods of control.

FORESTRY 503, 504: *Farm-Forestry.* For each, three hours. Two hours lecture, two hours laboratory. Required of all sophomore agricultural students.

An introduction to and the application of forest practices in correlation with agriculture.

Laboratory work includes visits to nearby farm woodlands in order to demonstrate the application of timber growing and utilization practices to agricultural lands.

FORESTRY 531: *Dendrology.* (See Botany 531)

FORESTRY 601, 602: *Applied Forestry.* For each, three

hours. Two hours lecture, two hours laboratory. Prerequisites, Forestry 501 and 502.

An introduction to silvics dealing in particular with the silvicultural characteristics of trees and the factors of site and the application of these characteristics and factors in the treatment of a forest.

Laboratory work includes visits to nearby forest areas for field study in silvics and for the application of various silvicultural treatments in a forest.

FORESTRY 532: *Plant Ecology* (See Botany 532)

FORESTRY 512: *Forest Entomology.* (see Zoology 512)

FORESTRY 603, 604: *Forest Soils.* For each four hours. Three hours lecture, two hours laboratory. Prerequisite, one year of freshman chemistry.

The fundamentals of soil science in its relation to the growth and distribution of forest trees.

FORESTRY 641: *Plane Surveying.* (see Civil Engineering 641f), summer camp. Prerequisite, completion of junior year of forestry curriculum.

FORESTRY 605: *Forest Engineering.* Three hours, summer camp. Prerequisite, completion of junior year of forestry curriculum.

A study of the engineering principles in forest practice and their application in the forest.

FORESTRY 607: *Forest Mensuration.* Four hours, summer camp. Prerequisite, completion of junior year of forestry curriculum.

The use of forest mensuration tools in forest and forest product direct measuring, in estimating, and in predicting yields and growth.

FORESTRY 701, 702: *Forest Management.* For each, three hours. Two hours lecture, two hours laboratory. Prerequisite, completion of junior year summer camp.

The need for forest management and its underlying principles, and the preparation of management plans.

Laboratory work includes practical application in the forest, and in particular the obtaining of information necessary for the formulation of management plans.

FORESTRY 703: *Forest Finance.* Three hours. Three hours lecture.

The economic and financial considerations applied to forestry.

FORESTRY 705, 706: *Forest Utilization.* For each, three hours. Two hours lecture, two hours laboratory. Prerequisite, completion of junior year summer camp.

Indentification, properties, and uses of local commercial woods, the harvesting and manufacturing of forest products, wood seasoning and preservation.

Laboratory work includes the study of local commercial wood samples, and field trips to trace the removal of forest products from the land and their manufacture into finished material at local wood-using plants.

FORESTRY 631: *Forest Pathology.* (see Botany 631)

FORESTRY 635: *Plant Propagation.* (see Botany 635)

SCHOOL OF ARTS AND SCIENCES

HERBERT L. HUGHES, Dean

PURPOSE

The purpose of the School of Arts and Sciences may be stated as follows: (1) to provide a broad, general education for those who desire this rather than a more specialized, technical education; (2) to give the basic courses common to the other Schools of the college, such as, English, mathematics, foreign languages, natural sciences, etc.; (3) to provide pre-professional training for those students who intend to study law, medicine, pharmacy, dentistry, etc.; (4) to assist in the preparation of prospective teachers who desire to major in and teach such subjects as art, English, foreign languages, mathematics, natural science, social science, music, etc.; and (5) to provide specialized training in zoology, chemistry, music, etc.

In general, the student in the School of Arts and Sciences is required to acquaint himself with the main fields of intellectual interest and in addition to acquire, through his major study, a thorough knowledge of some special field. Thus, he may obtain a liberal education, which will prove invaluable to him as preparation for a business or professional career as well as for richer and better living.

DEPARTMENT AND CURRICULA

The School of Arts and Sciences includes the departments of Art, Chemistry, English and Foreign Languages, Health and Physical Education for Men, Health and Physical Education for Women, Journalism, Mathematics, Music, Physics, Social Sciences, and Zoology. It offers curricula leading to the regular degrees of bachelor of arts and bachelor of science, and the more specialized degrees of bachelor of music and bachelor of arts and science in a special subject.

The courses for the regular B.A. and B.S. degrees are practically the same for the first two years and are mainly of a basic or general character. During the last two years, or earlier, the student is required to specialize, or major, in a field of study and to choose his minor study, subject to the approval of the head of the department of his major subject and the dean of the School. If he majors in language (English, French, Spanish, etc.), or social science (history, economics, sociology, etc.), or fine arts (art, music, etc.), he is awarded the B.A. degree on completion of the curriculum. If he majors in science (chemistry, mathematics, zoology, etc.), he is awarded the B.S. degree. If he takes a specialized

curriculum, he is awarded the B.A. or B.S. degree in the special subject taken.

The curriculum for the B.A. degree or the general B.S. degree (usually called the academic, or liberal arts, curriculum) requires 130 semester hours for completion. It requires as a part of the 130 hours a major of 30 semester hours and a minor of 21 hours in a subject related to the major, leaving about 27 hours of elective courses to be completed during the last two years.

The curriculum for the B.S. degree in a special subject usually requires more work in the special subject than does the academic curriculum, and permits fewer electives, on account of the vocational use to be made of the special subject.

SUBJECTS GIVEN

The subjects given in the School of Arts and Sciences are, chemistry, English, French, history, journalism, mathematics, music, physical education, physics, political science, sociology, Spanish, speech, and zoology.

ENTRANCE REQUIREMENTS

An applicant for admission to the freshman class of the School of Arts and Sciences must have been graduated with not fewer than 15 acceptable units from a four-year course in an accredited secondary school or must attest an equivalent preparation.

Students who expect to major or minor in mathematics or in science must have completed in their high school course one unit in plane geometry and at least one and one-half units in algebra. Those intending to major in subjects other than mathematics or science are required to have completed one year of algebra, but geometry is not required of them for entrance.

GRADUATION REQUIREMENTS

The candidate for a degree in the School of Arts and Sciences is required to complete one of the curricula given on the pages which immediately follow, and earn as many quality points as there are hours in his curriculum; and he must comply with such other college requirements as are made of all candidates for graduation.

Before choosing a curriculum he should read the foregoing paragraphs under "School of Arts and Sciences" which describe the curricula offered in this School. The student who has decided on his major will begin that curriculum

which provides a major in his chosen subject. Those students who have not decided on their major should register in the Academic Curriculum inasmuch as the subjects included in it are of a basic character and are required in most college curricula.

ACADEMIC (OR LIBERAL ARTS) CURRICULUM

(LEADING TO THE B.A. OR B.S. DEGREE)

This curriculum is designed for those who desire a liberal or general education; or those who desire general preparation for the professions of law, medicine, etc.; or those who desire a broad, basic education in preparation for teaching or graduate work, later; or those who would prefer to take work toward a degree while they are making up their minds as to what vocation or profession they will enter.

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Foreign language	6	
Any two of the following three subjects; the one omitted to be taken later:		
History 401, 402;		
Mathematics 401, 402 or 405, 406;		
Science (Zoology 400, Botany 402; or Chemistry 407, 408)	12 to 14	
Orientation	1	
Physical Education	2	
Total		27 or 29

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
History 501, 502 or Political Science 501, 502	6	
Foreign language (the one already begun)	6	
Science (zoology, chemistry, or physics)	6	
Physical Education	2	
Courses omitted the freshman year	6 or 8	
Total		32 or 34

*JUNIOR AND SENIOR YEARS	Semester Hours	
Major subjects: enough to make a total for the four years of	30	
Minor subject: enough to make a total for the four years of	21	
Electives: enough to bring semester hours of curriculum up to a total of	130	
TOTAL semester hours in curriculum		130

*Before the student enters upon the work of these last two years he must choose a major study and a minor study, subject to the approval of the head of the department in which he takes his major and of the Dean of the School of Arts and Sciences. Subjects in which the major on the Academic Curriculum may be taken are: chemistry, English, French, history, journalism, mathematics, political science, sociology, Spanish, speech, zoology. For details as to the major and minor, see under the department of the major subject.

ART CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF ARTS IN ART)

FRESHMAN YEAR	Semester Hours	
Freshman Orientation	1	
English 401, 402: Composition and Rhetoric	6	
History 401, 402: European History	6	
Foreign Language	6	
Art 401: Art Structure	2	
Art 411: Elementary Design	2	
Art 450, 451: Elementary Drawing	4	
Art 564: Art Appreciation	1	
Art 470: Elementary Painting	3	
Physical Education	2	
Total semester hours		33

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Foreign language	6	
Zoology 400, Botany 402; or Chemistry 407, 408; or Physics 504, 505	6-8	
Art 510: Design	3	
Art 550: Advanced Drawing	2	
Art 565: Art Appreciation	2	
Art 570: Oil Painting	3	
Physical Education	2	
Total semester hours		30 or 32

JUNIOR YEAR	Semester Hours	
Social Science	6	
Minor subject	6	
Art 540, 541: Craft Survey	6	
Art 666, 667: Art History	6	
Electives	10	
Total semester hours		34

SENIOR YEAR	Semester Hours	
Minor subject	6	
Art 610: Advanced Design	3	
Art 650, 651: Life Drawing	4	
Electives in Art	6	
Electives	12	
Total semester hours		34
TOTAL semester hours in curriculum		132

*See also under Art Department.

CHEMISTRY CURRICULUM*

(LEADING TO THE B.S. DEGREE IN CHEMISTRY)

This curriculum is planned to give a broad and fundamental training in the major divisions of chemistry and their applications. The aim of the curriculum is to give the student thorough instruction by means of lectures, recitations, and laboratory practice, in the principles of inorganic, analytical, organic, physical and industrial chemistry. The modern conception of an education in chemistry includes a study of physics and a thorogh knowledge of mathematics. Stu-

dents who complete this curriculum will be prepared for industrial positions in chemical plants and for graduate work in the science.

FRESHMAN YEAR

First Semester	Semester Hours
English 401	3
Chemistry 401	4
Mathematics 401	3
Mathematics 402	3
Engineering 451	2
Freshman Orientation 401	1
Physical Education	1
Total semester hours	17

Second Semester	Semester Hours
English 402	3
Chemistry 402	5
Mathematics 501	3
Engineering 452	2
Engineering 502	3
Physical Education	1
Total semester hours	17

SOPHOMORE YEAR

First Semester	Semester Hours
French 401	3
Economics 501	3
Chemistry 605	3
Mathematics 600	3
Physics 501	4
Physical Education	1
Total semester hours	17

Second Semester	Semester Hours
French 402	3
Economics 502	3
Chemistry 606	3
Mathematics 601	3
Physics 502	4
Physical Education	1
Total semester hours	17

JUNIOR YEAR

First Semester	Semester Hours
Chemistry 707: Advanced Quantitative Analysis	3
Chemistry 601: Organic Chemistry	5
Chemistry 611: Introductory Physical Chemistry	4
French 501	3
Speech 410	3
Total semester hours	18

Second Semester	Semester Hours
Chemistry 602: Organic Chemistry	5
Chemistry 708: Advanced Quantitative Analysis	3
Chemistry 612: Introductory Physical Chemistry	4
English 603: Technical English	3
French 503: Scientific French	3
Total semester hours	18

SENIOR YEAR

First Semester	Semester Hours	
Chemistry 701: Organic Preparations	2	
Chemistry 702: Qualitative Organic Analysis	1	
Chemistry 711: Chemical Thermodynamics	3	
Chemistry 713: Theoretical Electrochemistry	3	
Chemistry 715: History of Chemistry	2	
Psychology 501	3	
**Electives	3	
Chemistry 716: Chemistry Seminar	1	
Total semester hours		18

Second Semester	Semester Hours	
Chemistry 703: Quantitative Organic Analysis	2	
Chemistry 710: Colloid Chemistry	3	
Chemistry 714: Applied Electrochemistry	3	
Chemistry 717: Chemistry Seminar	1	
Economics 502 or Political Science 502	3	
Elective	6	
Total semester hours		18
TOTAL semester hours in four-year curriculum		140

*See also under Chemistry Department.

**Electives may be chosen from engineering, physics, chemistry, mathematics or psychology. If a student plans to teach, he should attend the summer session and take the required course in Education.

ENGLISH CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

This curriculum allows the student a choice of minors in many of the subjects and divisions of the college. Consult the head of the department for advice and information regarding these minors.

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Foreign language	6	
Any two of the following three subjects; the one omitted to be taken later:		
History 401, 402		
Mathematics 401, 402 or 405, 406		
Science (Zoology 400, Botany 402; or Chemistry 407, 408)	12 to 14	
Orientation	1	
Physical Education	2	
Total		27 or 29

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
History 501, 502 or Political Science 501, 502	6	
Foreign language (the one already begun)	6	
Science (chemistry, physics, or zoology)	6	
Physical Education	2	
Courses omitted in freshman year	6 or 8	
Total		32 or 34

**JUNIOR AND SENIOR YEARS	Semester Hours	
Major: English 618, 622 and enough additional English to make a total for the four years of	30	
Minor: enough hours in a related subject, chosen with the approval of the head of the department, to make for the four years a total of	21	
Electives: enough to bring the semester hours in the curriculum up to a total of	130	
TOTAL semester hours in curriculum		130

*See also under Department of English and Foreign Languages.

**Before the beginning of the junior year English majors must consult the head of the department for approval of their minor subject and electives.

FRENCH CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

This curriculum allows the student a choice of minors from most of the subjects and divisions of the college. Consult the department head for further information.

Students who enter Tech with high school credits in French will register as follows:

Those with *one year* of high school French will register in French 401; those with *two years* of high school French will register in French 501—such students cannot receive credit for French 401, 402; those with *three years* of high school French will register in French 502—such students cannot receive credit for French 401, 402 or 501.

All students in French are advised to complete a year's sequence without any time interval between courses, and to take two years of required work in the language without any unnecessary interval between courses.

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
French 401, 402 (If French was taken in high school, see note above)	6	
Any two of the following three subjects; the one omitted to be taken later: History 401, 402; Mathematics 405, 406; Science (Zoology 400, Botany 402; or Chemistry 407, 408)	12 to 14	
Physical Education	2	
Orientation	1	
Total		27 or 29

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
History 501, 502 or Political Science 501, 502	6	
French 501, 502 (provided 401, 402 taken first year)	6	
Science (Chemistry, Physics or Zoology)	6	
Physical Education	2	
Electives (Prospective teachers take Psychology 501, 502)	6	
Total		32

**JUNIOR AND SENIOR YEARS	Semester Hours	
Major: French 550, 551, 600 plus nine semester hours of French courses numbered above 600	18	
Minor: Enough hours in a related subject, chosen with the approval of the head of the department, to make for the four years a total of	21	
History 609, 620, or 631	3	
Art 564	2	
Music 630	2	
Electives: Enough to make the total semester hours for the curriculum	130	
TOTAL semester hours in the curriculum		130

*See also under Department of English and Foreign Languages.

**Before the beginning of the junior year majors in French must consult the head of the department for approval of their minor subject and electives.

HEALTH AND PHYSICAL EDUCATION CURRICULUM FOR MEN

FRESHMAN YEAR	Semester Hours	
Freshman Orientation	1	
English 401, 402	6	
Mathematics 401, 402, or 405, 406	6	
Zoology 400, Botany 402	8	
Physical Education 401, 402, or 406, 407, 408, 420, 490	8	
Electives	3	
Total semester hours		32

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Psychology 501, 504	6	
Speech 410	3	
Physical Education 501, 502, 507, 508, 500, 590	11	
History 501, 502	6	
Total semester hours		32

NOTE: Those who intend to teach will, after they have completed this two-year curriculum, register in the School of Education and complete work for a degree.

HEALTH AND PHYSICAL EDUCATION CURRICULUM FOR WOMEN

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Zoology 400, Botany 402	8	
Mathematics 405, 406	6	
Freshman Orientation	1	
History 501, 502	6	
Physical Education 403, 404	2	
Physical Education 540M, and 550M	2	
Elective	1	
Total semester hours		32

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Physics 504	3	
Psychology 501, 504	6	
Home Economics 501	3	
Speech 410	3	
Physical Education 503, 504, 530, 421	4	
Physical Education 500	3	
Physical Education 520, 521	3	
Elective	1	
Total semester hours		32

NOTE: Those who intend to teach will, after they have completed this two-year curriculum, register in the School of Education and complete work for a degree.

HISTORY CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

FRESHMAN YEAR	Semester Hours	
Orientation 401	1	
English 401-402	6	
Foreign Language	6	
History 401-402	6	
Mathematics 405-406 (or 401-2)	6	
Physical Education	2	
Science	4	
Total		31

SOPHOMORE YEAR	Semester Hours	
English 501-502	6	
Foreign Language	6	
History 501-502	6	
Physical Education	2	
Science	8	
Elective	3	
Library Science	2	
Total		33

JUNIOR YEAR	Semester Hours	
Economics 501-502	6	
History 607-609	6	
Political Science 501-502	6	
Sociology 501-502	6	
Minor Subject	6	
Elective	3	
Total		33

SENIOR YEAR	Semester Hours	
History 700, 701, 750, 760, 765, 640, 650 or History 620, 621, 630, 631, 680, 681, 705	12	
Minor Subject	6	
Electives	15	
Total		33
TOTAL semester hours for graduation		130

*See also under Department of Social Sciences.

JOURNALISM CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

FRESHMAN YEAR	Semester Hours
Orientation	1
English 401-402	6
Any two of the following three subjects; the one omitted to be taken later: History 401, 402; Mathematics 401, 402 or 405, 406; Science (Zoology 400, Botany 402; or Chemistry 407, 408)	12 to 14
Physical Education	2
Foreign language	6
Total	27 or 29

SOPHOMORE YEAR	Semester Hours
English 501, 502	6
History 501, 502 or Political Science 501, 502	6
Foreign language (the one begun the first year)	6
Physical Education	2
Science (zoology, chemistry or physics)	6
Courses omitted in freshman year	6 or 8
Total	32 or 34

**JUNIOR AND SENIOR YEARS	Semester Hours
Major: Journalism and required English to make a total for the four years of	31
Minor: subject related to Journalism, chosen with the approval of head of department and dean—enough for the four years to make a total of	21
Electives: enough to bring total hours in curriculum to	130
TOTAL semester hours in curriculum	130

*See also under Journalism Department.

**Students must consult the head of the department before the end of the sophomore year regarding their program of studies for the junior and senior years.

MATHEMATICS CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

FRESHMAN YEAR	Semester Hours
Orientation	1
English 401-402	6
Foreign language	6
Mathematics 401, 402	6
Physical Education	2
Either one of the following subjects; the one omitted to be taken later: History 401, 402; Science (Zoology 400, Botany 402; or Chemistry 407, 408)	6 or 8
Total	27 or 29

SOPHOMORE YEAR	Semester Hours
English 501, 502	6
**History 501, 502 or Political Science 501, 502	6
Foreign language (the one begun the first year)	6
Science (physics, chemistry or zoology)	6
Mathematics: two courses of the three, 403, 501, 502, the one omitted to be taken later	6
Physical Education	2
Total	32

JUNIOR AND SENIOR YEARS	Semester Hours	
Major subject: mathematics to make a total in curriculum of	30	
Minor subject enough in a subject related to mathematics to make a total in curriculum of	21	
The required courses not already taken.		
Electives: enough to bring total in curriculum up to	130	
TOTAL semester hours in the curriculum		130

*See also under Mathematics Department.
**Prospective teachers take History 501, 502.

MEDICAL LABORATORY TECHNICIAN'S CURRICULUM

(WITH A MAJOR IN BIOLOGY AND A MINOR IN LABORATORY TECHNIQUE AND LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

FRESHMAN YEAR*	Semester Hours	
Orientation	1	
English 401, 402	6	
Foreign language	6	
Zoology 400, Botany 402; or Chemistry 401, 402	8 or 9	
Physical Education	2	
Either History 501, 502 or Mathematics 405, 406; the one omitted to be taken later	6	
Total		29 or 30

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Political Science 501, Psychology 501	6	
Foreign language (the one already begun)	6	
Zoology, chemistry; take one omitted freshman year	8 or 9	
Physical Education	2	
**Electives	6	
Total		32 or 33

JUNIOR AND SENIOR YEARS	Semester Hours	
Laboratory Technique	18	
Zoology 625	3	
Zoology Electives	9	
Typing	2	
Physics 505, 506	6	
Chemistry 605	3	
Chemistry 606	3	
Social Science (history, political science, or sociology)	3	
Electives	22	
TOTAL hours in curriculum		130

*Those students who do not plan to earn a degree may start their technique courses the second semester of the Freshman year, after having completed Zoology 400.
**A student may elect to take in his Sophomore year one or more of the technique courses to determine whether or not he is adept in the field of laboratory technique; the subjects omitted in the sophomore year to be taken later.

MUSIC CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF MUSIC)

This curriculum is designed for those who wish to stress the performing aspect in their training in any major—in voice, piano or in some instrument of the Symphony Orches-

tra. Those who major in voice will be required to take a minimum of six hours in piano.

FRESHMAN YEAR	Semester Hours	
Orientation	1	
English 401-402	6	
Speech 410	3	
Theory 410, 411	6	
Applied Music	10	
Ensemble	2	
Physical Education	2	
Total		30

SOPHOMORE YEAR	Semester Hours	
Physics 504	3	
Academic Elective	3	
Psychology 501	3	
History of Music 620, 621	6	
Theory 501, 502	6	
Applied Music	10	
Ensemble	2	
Physical Education	2	
Total		35

JUNIOR YEAR	Semester Hours	
Social Science	6	
Academic Electives	3	
Free Electives	6	
Theory 601, 601	6	
Applied Music	8	
Ensemble	2	
Conducting 720	2	
Total		33

SENIOR YEAR	Semester Hours	
Academic Electives	6	
Free Electives	6	
Theory Electives	6	
Applied Music	8	
Graduation Recital		
Ensemble	2	
Total		28
TOTAL semester hours in curriculum		132

*See also under Department of Music.

FIFTH YEAR

Music Recital—Required of those taking 18 hours in any one or more fields of applied music.

TOTAL semester hours in curriculum 157

PHYSICS CURRICULUM[1]

(LEADING TO THE B.S. DEGREE IN PHYSICS)

This curriculum is designed to give the student a knowledge of the fundamental phenomena and basic principles of the science. Emphasis is placed upon the elements of scientific thinking and scientific techniques as well as upon scientific knowledge. The course offers preparation for practice in the newer fields of applied science, such as electronics, meteorology, and geophysics. Positions in research labora-

tories, in the Weather Bureau, in the exploration work of the oil industry, and at the National Bureau of Standards are open to men who have taken the B.S. degree in Physics. Students who complete this curriculum will also be prepared to pursue graduate study in Physics. The nature of the course is such as to require minors in the fields of Mathematics and Chemistry. Approximately one third of the required courses are in the Humanities, thus affording a reasonably liberal background.

FRESHMAN YEAR

First Semester	Semester Hours
English 401	3
Chemistry 401	4
Mathematics 401	3
Mathematics 402	3
Engineering 451	2
Orientation 401	1
Physical Education	1
Total semester hours	17

Second Semester	Semester Hours
English 402	3
Chemistry 402	4
Mathematics 501	3
Engineering 401	1
Engineering 452	2
History 502	3
Physical Education	1
Total semester hours	17

SOPHOMORE YEAR

First Semester	Semester Hours
Physics 501	4
Mathematics 600	3
Chemistry 605	3
[2]French 401 or Spanish 401	3
Economics 501	3
Physical Education	1
Total semester hours	17

Second Semester	Semester Hours
Physics 502	4
Mathematics 601	3
Chemistry 606	3
[2]French 402 or Spanish 402	3
Economics 502	3
Physical Education	1
Total semester hours	17

JUNIOR YEAR

First Semester	Semester Hours
Physics 630	4
Mathematics 602	3
Chemistry 611	4
[2]French 501 or Spanish 501	3
Elective	3
Total semester hours	17

Second Semester	Semester Hours	
Physics 631	4	
Mathematics 706	3	
Chemistry 612	4	
[2]French 503 or Spanish 516	3	
English 603	3	
Total semester hours		17

SENIOR YEAR

First Semester	Semester Hours	
Physics 730	3	
Physics Elective	4	
[3]Technological Electives	8	
Liberal Arts Elective	3	
Total semester hours		18

Second Semester	Semester Hours	
Physics 731	3	
Physics Elective	4	
[3]Technological Electives	8	
Liberal Arts elective	3	
Total semester hours		18
TOTAL semester hours in four-year curriculum		138

[1]See also under Department of Physics.

[2]Choice to be made with the advice of the head of the department.

[3]Technological Electives may be chosen from physics, mathematics, and engineering.

POLITICAL SCIENCE CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

FRESHMAN YEAR	Semester Hours	
Orientation 401	1	
English 401-402	6	
Foreign Language	6	
History 401-402	6	
Mathematics 405-406	6	
Physical Education	2	
Science	4	
Total		31

SOPHOMORE YEAR	Semester Hours	
English 501-502	6	
Foreign Language	6	
History 501-502	6	
Physical Education	2	
Science	8	
Elective	3	
Library Science	2	
Total		33

JUNIOR YEAR	Semester Hours	
Economics 501-502	6	
History	6	
Political Science 501-502	6	
Sociology 501-502	6	
Minor Subject	6	
Elective	3	
Total		33

SENIOR YEAR	Semester Hours	
Political Science (603-610-612-614-618-620-625)	12	
Minor Subject	6	
Electives	15	
TOTAL semester hours in curriculum		130

*See also under Department of Social Sciences.

PRE-DENTAL OR PRE-PHARMACY CURRICULUM

Completion of this two-year curriculum will prepare students to enter most dental or pharmacy schools, but as soon as the student has decided which dental or pharmacy school he will enter, the adviser will adjust the curriculum, if necessary, to meet the individual requirements of that school.

FRESHMAN YEAR	Semester Hours	
English 401-402	6	
Zoology 400, Botany 402	8	
Chemistry 401, 402	9	
Mathematics 405, 406	6	
History 402	3	
Orientation	1	
Physical Education	2	
Total		35

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Political Science	3	
Physics 501, 502	8	
Zoology 625	3	
Organic Chemistry	4	
Speech 410	3	
Physical Education	2	
Elective	6	
Total		35
TOTAL semester hours in curriculum		70

PRE-LAW CURRICULUM

Students intending to study law would do well to complete a degree before entering law school. Those who cannot do so should follow the curriculum given below.

After completing the requirements for the LL.B. degree in an approved law school, the student who has previously finished this three-year pre-law curriculum may receive the B.A. degree at Louisiana Polytechnic Institute provided the usual academic standards have been maintained.

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Foreign language, French preferred	6	
Orientation	1	
Physical Education	2	
Any two subjects of the following three; the one omitted to be taken later: History 401, 402; Mathematics 405, 406; Science (Zoology 400, Botany 402; or Chemistry 407, 408)	12 to 14	
Speech 410	3	
Total		30 to 32

SOPHOMORE YEAR	Semester Hours
English 501, 502	6
History 501, 502 or Political Science 501, 502	6
Foreign language (the one already begun)	6
Science (Zoology, chemistry, or physics)	6
Physical Education	2
Courses omitted in freshman year	6 or 8
Total	32 or 34

JUNIOR YEAR	Semester Hours
Enough hours in commerce, economics, English, and social science, chosen with the approval of the dean, to make a total of at least	34

PRE-MEDICAL CURRICULUM

The curriculum outlined herein is suggested for those students who plan to spend only three years in this Institution before transferring to medical school.

After completing the requirements for the M.D. degree in an approved medical school, the student who has previously finished this three-year pre-medical curriculum may receive the B.S. degree at the Louisiana Polytechnic Institute provided the usual academic standards have been maintained.

Since the requirements of medical schools vary considerably as to specific entrance subjects, it is essential that the student decide early as to the school to which he wishes to apply for entrance and inform the adviser of pre-medical students. The adviser will give him full information concerning the additional entrance requirements that are specified by the various medical schools.

FRESHMAN YEAR	Semester Hours
Chemistry 401, 402	9
English 401, 402	6
Mathematics 401, 402; or 405, 406	6
Zoology 400, Botany 402	8
Orientation	1
Physical Education	2
Total semester hours	32

SOPHOMORE YEAR	Semester Hours
*French 401, 402	6
English 501, 502	6
Economics 501, 502; Political Science 501, 502; or Sociology 501, 502	6
Chemistry 605, 606	6
Speech 410	3
Physical Education	2
Zoology 502	5
Total semester hours	34

JUNIOR YEAR	Semester Hours
French 501, 503	6
Chemistry 601, 602	10
Psychology 501, 502	6
Chemistry 630	4
Physics 501, 502	8
Total semester hours	34

*Students who present two units of high school French will register for French 501.

PRE-NURSING CURRICULUM

For students who intend to enter nursing school and become registered nurses.

FRESHMAN YEAR	Semester Hours
Zoology 400, Botany 402	8
English 401, 402	6
French or Spanish 401, 402	6
History 401, 402	6
Mathematics 405, 406	6
Orientation 401	1
Physical Education	2
Total	35

SOPHOMORE YEAR	Semester Hours
Chemistry 401, 402	8
English 501, 502	6
Foreign language (the one already begun)	6
Psychology 501, 502	6
Sociology 505	3
Physical Education	2
Elective	3
Total	34

PRE-PROFESSIONAL CURRICULUM IN SOCIAL WELFARE

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

This curriculum is designed primarily for those students who plan to do social work, or to do graduate professional study in the field of social work.

FRESHMAN YEAR	Semester Hours
Zoology 400-620	7
English 401-402	6
French 401-402	6
History 401-402	6
Mathematics 405-406	6
Orientation 401	1
Physical Education	2
Total	34

SOPHOMORE YEAR	Semester Hours
English 501-502	6
French 501-502	6
History 501-502	6
Physical Education	2
Political Science 501-603	6
Sociology 501-502	6
Total	32

JUNIOR YEAR	Semester Hours	
Economics 501	3	
History 607-760	6	
Political Science 612	3	
Psychology 501-502	6	
Sociology 608-614	6	
Sociology 600	3	
Speech 410	3	
Electives	3	
Total		33

SENIOR YEAR	Semester Hours	
Economics 629 or 630	3	
Sociology 604-620	6	
Sociology 610-612	6	
Electives	16	
Total		31
TOTAL semester hours in curriculum		130

SOCIOLOGY CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

FRESHMAN YEAR	Semester Hours	
Orientation 401	1	
English 401-402	6	
Foreign Language	6	
History 401-402	6	
Mathematics 405-406	6	
Physical Education	2	
Science	4	
Total		31

SOPHOMORE YEAR	Semester Hours	
English 501-502	6	
Foreign Language	6	
History 501-502	6	
Physical Education	2	
Science	8	
Library Science	2	
Elective	3	
Total		33

JUNIOR YEAR	Semester Hours	
Economics 501-502	6	
History	6	
Political Science 501-603	6	
Sociology 501-502	6	
Minor Subject	6	
Elective	3	
Total		33

SENIOR YEAR	Semester Hours	
Sociology (604-608-610-612-614-616-618-620)	12	
Minor Subject	6	
Elective	15	
Total		33
TOTAL semester hours in the curriculum		130

*See also under the Department of Social Sciences.

SPANISH CURRICULUM[1]

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

Students who enter Tech with high school credits in Spanish will register as follows:

Those with *one* year of high school Spanish will register in Spanish 401; those with *two* years of high school Spanish will register in Spanish 501—such students cannot receive credit for Spanish 401, 402; those with *three* or *four* years of high school Spanish will register in Spanish 502—such students cannot receive credit in Spanish 401, 402 or 501.

All students in Spanish are advised to complete a year's sequence without any time interval between courses, or to take two years of required work in the language without any unnecessary interval between courses.

FRESHMAN YEAR	Semester Hours
English 401, 402	6
Orientation	1
Physical Education	2
Spanish 401, 402 (If Spanish was taken in high schol, see note above)	6
Any two of the following three subjects; the one omitted to be taken later:	
History 401, 402	
Mathematics 401, 402 or Mathematics 405, 406	
Science (Zoology 401, 402; or Zoology 400 and Botany 402; or Chemistry 401, 402 or Chemistry 407, 408	12 or 14
Total semester hours	27 or 29

SOPHOMORE YEAR	Semester Hours
English 501, 502	6
History 501, 502 or Political Science 501, 502	6
Physical Education	2
Science (zoology, chemistry or physics)	6 or 8
Spanish 501, 502	6
Courses omitted in freshmen year	6 or 8
Total semester hours	32 or 34

JUNIOR AND SENIOR YEARS[2]	Semester Hours
[3]Major: Spanish 601, 602, plus 12 semester hours of courses numbered from 603-625	18
Minor: Enough hours in a related subject, chosen with the approval of the head of the department, to make a total for the four years of	21
Art 564	2
Music 630	2
English 618	3
Electives	21 or 23
TOTAL semester hours in the curriculum	130

[1]See also under Department of English and Foreign Languages.

[2]Before the beginning of the junior year majors in Spanish must consult the head of the department for approval of their minor subject and electives.

[3]A major in Spanish ordinarily consists of 30 semester hours; but in cases in which a student offers high school credit in Spanish and registers in and advanced course his first year, his total hours for a major will be reduced by the amount of elementary work he is ineligible to take in college. A major in Spanish requires 18 hours of work numbered 600 or above.

SPANISH CURRICULUM WITH A COMMERCE MINOR

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

FRESHMAN YEAR				Semester Hours
For minors in Accounting or Secretarial Science:				
English 401, 402				6
Orientation				1
Physical Education				2
Spanish 401, 402 (If Spanish was taken in high school, see note above)				6
Mathematics 419, 420				6
For minors in Accounting:				
Science (Zoology 400, Botany 402; or Chemistry 401, 402, or Chemistry 407, 408)	(8)	(8)		
For minors in Secretarial Science:				
Secretarial Science 501, 502	(4)			
History 401, 402	(6)	(10)	8 or 10	
Total semester hours				29 or 31

SOPHOMORE YEAR				Semester Hours
For minors in Accounting or Secretarial Science:				
English 501, 502				6
Physical education				2
Spanish 501, 502				6
For minors in Accounting:				
Accounting 401, 402	(8)			
History 401, 402	(6)			
Art 564	(2)			
Music 630	(2)	(18)		
For minors in Secretarial Science:				
Secretarial Science 503, 504	(4)			
Science (Zoology 400, Botany 402; or Chemistry 401, 402 or Chemistry 407, 408)	(8)			
History 501, 502 or Political Science 501, 502	(6)	(18)	18	
Total semester hours				32

JUNIOR AND SENIOR YEARS				Semester Hours
For minors in Accounting or Secretarial Science:				
Science (zoology, chemistry or physics)	6 or 8			
Spanish 516, 601, 602, plus 9 semester hours of courses numbered 603-625	18			
English 618	3			
Electives (For minors in Secretarial Science, Accounting 401, 402 strongly recommended; for minors in Accounting, Secretarial Science 501, 502, 503, 504 strongly recommended.)	16 or 18			
For minors in Accounting:				
Accounting 650, 651, 700, 701, 703, 704	(18)			
History 501, 502 or Political Science 501, 502	(6)	(24)		
For minors in Secretarial Science:				
Secretarial Science 601, 602, 603, 604, 607, 608	(18)			
Art 564	(2)			
Music 630	(2)	(22)		
TOTAL semester hours in curriculum				130

*Students wishing to minor in Business Administration or in Economics on this curriculum may do so with the joint approval for courses in the minor subject of the Head of the Department of English and Foreign Languages, the Dean of the School of Business Administration and the Professor of Spanish.

SPEECH CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF ARTS)

FRESHMAN YEAR	Semester Hours	
Orientation	1	
English 401, 402	6	
Foreign language	6	
Physical Education	2	
History 401, 402; Mathematics 405, 406; science (zoology 401, History 401, 402; Mathematics 405, 406; science (Zoology 400, Botany 402; or Chemistry 407, 408). Any two subjects; the one omitted to be taken later	12 or 14	
Total semester hours		27 or 29

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
History 501, 502 or Political Science 501, 502	6	
Physical Education	2	
Science (zoology, chemistry or physics)	6	
Speech 410, 511	6	
Total semester hours		32

**JUNIOR AND SENIOR YEARS	Semester Hours	
Major subject: enough Speech courses to make a total for the four years of	30	
Minor: enough in a related subject, chosen with the approval of the head of the department, to make a total for the four years of	21	
Any required courses not already completed.		
Electives: enough to bring the total semester hours in curriculum to	130	
TOTAL semester hours in curriculum		130

*See also under Department of English and Foreign Languages.

**Before the beginning of the junior year Speech majors must consult the head of the department for approval of their minor subject and electives.

ZOOLOGY CURRICULUM*

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

FRESHMAN YEAR	Semester Hours	
Orientation	1	
English 401, 402	6	
Foreign language	6	
Zoology 401, 402 or Chemistry 401, 402	8	
Physical Education	2	
Either History 501, 502 or Mathematics 401, 402; the one omitted to be taken later	6	
Total		29

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Political Science 501, Psychology 501	6	
Foreign language (the one already begun)	6	
Zoology, chemistry; take one omitted freshman year	8	
Physical Education	2	
Botany 402	4	
Total		32

JUNIOR AND SENIOR YEARS	Semester Hours	
Zoology, sufficient to make a total for the four years of	30	
Minor subjects, enough to make a total for the four years of	21	
Physics 501, 502 or 505, 506	6	
Social science (history, political science, or sociology)	3	
Chemistry	3	
Electives enough to bring total for curriculum to	130	
TOTAL semester hours in curriculum		130

*See also under Zoology Department.

Department of Art

F. ELIZABETH BETHEA, PROFESSOR AND HEAD OF THE DEPARTMENT.
ASSOCIATE PROFESSORS MARY MOFFETT, LOUISE SMITH.

Three curricula in Art are offered: one in the School of Arts and Sciences (see page 60), one in the School of Business Administration (see page 144), and one in the School of Education (see page 167). These curricula are designed to give the student a broad understanding of himself, his environment, the community and its cultural and business needs and possibilities, while at the same time providing a definite program of study in design, drawing, color, media, tools and technics directed toward professional application.

REQUIREMENTS FOR A MINOR IN ART

(For students in other departments)

Students from other departments who desire a minor in art are required to take twelve semester hours of advanced courses in Art, including Art 540-541, 610, 666 and 667, and in addition to Art 401, 411, 470, 450, 451, 510, 550, and 564.

Any student in the college may elect any course or courses for which he is eligible. The election of such courses must be with the approval of the head of the department in which he is registered, the head of the Department of Art, and the dean of the school in which the student is registered.

Art 402 and Art 501 are open to students in the School of Education only.

Art 475 is open to students in the School of Home Economics only.

Credit for Art 564 will not be given to students who expect to receive credit for Art 401 and 402 or Art 401 and Art 475.

DESCRIPTION OF COURSES

ART 401: *Art Structure.* Two hours.

An elementary course designed as a foundation for all art study. Theory and practice in the elements of art as a basis for appreciation of the fine arts and crafts of the past and present. Lectures illustrated with slides, prints, and objects; field trips; laboratory.

ART 402: *Art Structure for Students in Education.* Two hours. Prerequisite, Art 401.

A continuation of the study of the theory and practice in the elements and principles of art structure. Problems in drawing, painting, design, lettering, poster composition. Brief introduction to recent developments in teaching art activity in elementary grades. Lectures, discussions, reports, laboratory.

ART 411: *Elementary Design.* Two hours. Prerequisite, Art 401.

A continuation of the study of the theory and practice in the elements and principles of art structure. Formal problems in design and color. Pictorial composition, lettering and posters. Lectures, discussions, reports, laboratory.

ART 450: *Elementary Drawing.* Two hours.

A study of the principles underlying all creative and representative drawing with the application of those principles to sketching from still-life, landscape, and figure. Problems involving the use of one, two, and three point perspective. Freedom and ease in drawing combined with an observance of the principles of art structure. Independent studies of action figures, hands, feet, and head, submitted weekly.

ART 451: *Elementary Drawing.* Two hours. Prerequisite, Art 450.

A continuation of Art 450 with more advanced problems in drawing from still-life and figure. Field trips for sketching out-of-doors during the second half of semester. Independent studies of plant, tree and landscape forms submitted weekly.

ART 470: *Elementary Water Color Painting.* Three hours. Prerequisites, Art 401 and Art 450.

Technique of water color painting accompanying drawing and design in concurrent courses. Submission of two independent sketches weekly for conference. Class periods devoted to the problems involved in painting the approved compositions.

ART 475: *Art Structure for Students in Home Economics.* Two hours. Prerequisite, Art 401.

A continuation of the study of the theory and practice in the elements and principles of art structure. Problems supplementary to the work in Home Economics, applying fundamentals of art structure to costume design, problems of home and community life. Experiments with various media. Lectures, discussions, field trips, laboratory.

ART 501: *Art 402 continued.* Two hours. Prerequisite, Art 402.

A continuation of Art 402 with emphasis on craft materials and their use in the elementary grades. Problems in working out ways in which art activities contribute to the social studies; practice in planning units of study with reference to the use of art activities in reading, literature, science, etc. Lectures, reports, laboratory, observations.

ART 510: *Design.* Three hours. Prerequisites, Art 402, Art 411, or Art 475.

Problems in design involving the application of abstract, geometric, and conventionalized motifs used singly and in repetition. Emphasis on fine line, dark and light, and color. Experimentation with a variety of media and techniques. Research problems in historic ornament. Lectures, reports, laboratory.

ART 511: *Lettering and Layout.* Two hours. Prerequisites, Art 401 and either 402, 411, 475.

A course designed to provide a knowledge of styles of letters and their uses as well as problems and practice with lettering tools and technics of advertising, show card and poster design.

ART 540 and 541: *Craft Survey.* For each, three hours. Prerequisite, Art 402 or 411 or 475.

Survey of the elementary processes of weaving, metal crafts, ceramics and wood-carving as a basis for advanced study in one or more of these media.

ART 550: *Advanced Drawing.* Two hours. Prerequisite, Art 451.

More advanced problems in drawing. Similar in aim and content to Art 451, with the addition of problems in mechanical drawing involving the use of drawing tools. Plans, elevations, and perspective projections, with emphasis upon the elements of good design in architecture and interior decoration. Experimentation with a variety of media and drawing techniques.

ART 564: *Art Appreciation.* Two hours. (See note above).

An introduction to the study and enjoyment of art in its various expressions. Through abundant illustrative material the course aims to establish a few fundamental principles for critical judgment. The topics discussed in the lectures cover art in dress, in the home, furniture, textiles, pottery, painting, the graphic arts and civic art. No previous knowledge of art is required. One independent project is required demonstrating the relationship of art to the student's major field. Two meetings weekly.

ART 564 A: *For Freshman Art Majors.* One hour.

Identical lectures and readings but no independent project required. Two meetings weekly.

ART 564 C: *Art and Commerce.* Three hours.

Identical lectures, readings, and independent project. Special emphasis on dress for business offices and art service for commerce in display and advertising. Three meetings weekly.

ART 565: *Picture Study.* Two hours. Given alternate years.

An introduction to the appreciation of the modern schools of painting with especial emphasis on those of Europe and the United States. Notes prepared in the library and illustrated by prints.

ART 570: *Oil Painting.* Three hours. Prerequisites, Art 411 and 451.

A course similar in aim and method to Art 470.

ART 610: *Advanced Design.* Three hours. Prerequisite, Art 510. First semester. Given alternate years.

The application of the principles of art structure to the crafts, book decoration, graphic illustration, and advertising. The study of printing processes and methods of reproduction.

ART 640: *Metal Working.* Three hours. Prerequisite, Art 541. Given alternate years.

The execution of jewelry in silver and gold and of bowls, book-ends, flat ware and the like, in copper, brass, pewter, and silver, using original designs.

ART 644: *Weaving.* Three hours. Given alternate years. Prerequisite, Art 541.

Advanced problems in weaving on the following looms: two and four harness (table and foot types), Indian, Hugarian, etc. Emphasis is

placed on a thorough understanding of the fundamentals of weaving to insure ability for independent work in this medium. Class restricted to fifteen students.

ART 646: *Ceramics.* Three hours. Given alternate years. Prerequisite, Art 541.

An advanced course in pottery-making, including coiling, pressing, modeling and glazing techniques with special emphasis upon various decorative processes peculiar to ceramic art.

ART 650 and 651: *Life Drawing.* For each, two hours. Prerequisite, Art 550. Given in alternate years.

In the first semester, practice in drawing from the head and figure using costumed models. Modeling of the head and figure in clay. In the second semester, advanced practice in drawing and painting the head and figure singly and in groups, with emphasis upon the principles of arrangement.

ART 655: *Housing.* Three hours. Prerequisite, Art 451. Given in alternate years.

Advanced problems in the study of plans and elevations of exteriors and interiors of houses. Special emphasis is placed upon the development of domestic architecture and concomitant design in the South.

ART 660: *Teaching of Fine Arts.* Three hours. Prerequisite, junior standing in major subject. Given alternate years.

The planning of a course of art and the methods of presentation of such a course in the elementary and high schools. Practice in many of the techniques to be used.

ART 666: *History of Art.* Three hours. Given alternate years.

ART 667: *History of Art.* Three hours. Given alternate years.

A brief survey of the painting, sculpture, architecture and minor arts of ancient, medieval and modern periods. Notes prepared in the library and illustrated by prints.

ART 670: *Oil Painting.* Three hours. Given alternate years.

More advanced problems in painting with specific relation to the various points of view and the technical means of accomplishing them. Unlimited choice of subject matter.

ART 675: *Portrait Painting.* Three hours. Given alternate years. Prerequisites, Art 651, and 670.

Advanced practice in painting the head and figure using water color and oil.

ART 740: *Studio Problems.* Two hours. Prerequisite, Art 640, 644, or 646.

An elective course in advanced crafts. (This may be elected after a conference and with the approval of the Art Staff.)

ART 741: *Studio Problems.* Two hours. Prerequisite, Art 651 or 670 or 610.

An elective course in advanced drawing, painting or design. (This may be elected after a conference and with the approval of the Art Staff).

Department of Chemistry

G. C. HILMAN, PROFESSOR AND HEAD OF THE DEPARTMENT.
PROFESSOR EDWARD S. JENKINS; ASSOCIATE PROFESSOR T. W. RAY JOHNSON; ASSISTANT PROFESSOR CHARLES HOOPER SMITH.*

REQUIREMENTS FOR A MINOR IN CHEMISTRY

(For students in other departments)

Students from other departments who elect a minor in Chemistry should complete General Chemistry 401, 402 and Analytical Chemistry 605, 605. In addition, they should elect either Organic Chemistry 601, 602, or Physical Chemistry 611, 612.

DESCRIPTION OF COURSES

PLEASE NOTE: General Chemistry 401, 402 is the *basic* course in Chemistry, and is required of Chemistry Majors, Pre-Medical students, students of Agriculture, students of Engineering, and all other students who plan to take an advanced course in chemistry.

CHEMISTRY 401: *General Chemistry.* Four hours credit. Three lectures and three hours of laboratory work weekly during the regular session.

A course in the fundamental principles of chemistry. The principles of the science are illustrated by lectures, demonstrations, and recitations, involving general principles, laws of chemical combination, and a description of the elements and their more important compounds. Emphasis is placed on the study of the nonmetals.

CMEMISTRY 402: *General Chemistry.* Four or five hours credit. Three lectures and three or six hours of laboratory work weekly during the regular session. *Engineering students register for only three hours of laboratory work.*

This course is a continuation of the study of the fundamentals principles of chemistry in which special emphasis is placed on the study of the metals. The theory will be illustrated by solving a number of different types of problems. The laboratory work deals with the general principles and methods of Qualitative analysis.

CHEMISTRY 407, 408: *General Chemistry.* For each, four hours credit. Three lectures and three hours of laboratory work weekly during the regular session. Not open to Chemistry Majors, Pre-Medical students, students of Agriculture, students of Engineering, or any other student who plans to take an advanced course in chemistry.

The course is planned specifically for the considerable group of students who will take no other course in physical science, and for those who are not interested in the traditional type of elementary chemistry course which is required of students majoring in chemistry. It is designed primarily for those students whose major interest lies elsewhere.

*On leave for advanced study.

CHEMISTRY 515-516: *Advanced Inorganic Chemistry.* For each, three hours. Prerequisites, Chemistry 401, 402.

The course deals more thoroughly with the theories and principles of chemistry than is possible in an introductory course. Special attention is paid to modern advances in chemical theory. The discussion is non-mathematical, and the course is intended as a foundation for the later course in Physical Chemistry. Three lectures each week. (Not offered in 1947-48)

CHEMISTRY 520: *Organic Chemistry.* Four hours. First semester. Prerequisites, Chemistry 407, 408. Registration for this course is confined to students of Home Economics.

The fundamental theories and principles of that division of chemistry which has to do with the compounds of carbon. The principles of the science are illustrated by the preparation and study of typical representatives of the saturated series. Three hours of lectures and one three-hour laboratory period each week.

CHEMISTRY 601-602: *Organic Chemistry.* For each, five hours. Prerequisites, Chemistry 605, 606.

The fundamental theories and principles of that division of chemistry which has to do with the compounds of carbon. The principles of the science are illustrated by the preparation and study of typical representatives of the fatty and aromatic series. Three hours of lecture and two three-hour laboratory periods each week.

CHEMISTRY 605: *Analytical Chemistry.* Three hours credit. One hour of lecture and six hours of laboratory work weekly during the regular session. Prerequisite, Chemistry 401, 402.

The first four weeks' work in this course will be devoted to a comprehensive study of qualitative analysis. The remaining part of the semester will be used in a study of elementary quantitative analysis. It consist of a carefully selected series of quantitative determinations, designed to give the student as wide a range as possible of typical methods of quantitative manipulations, both gravimetric and volumetric. The theory will be illustrated by solving various types of problems.

This course is required of all students who expect to take further work in chemistry.

CHEMISTRY 606: *Analytical Chemistry.* Three hours credit. One hours of lecture and six hours of laboratory work weekly during the regular session. Prerequisite, Chemistry 605.

This course is a continuation of the study of the fundamental principles of quantitative analysis in which better technique and a higher precision will be required. The student will be given some choice in selecting the type of materials to be analyzed. Water, foods, feeds, alloys, rocks, cements, and other materials will be analyzed. These materials may vary from year to year.

This course is required of all students who plan to take additional work in chemistry.

CHEMISTRY 609-610: *Technical Analysis.* For each, two hours. First and second semesters. Prerequisites, Chemistry 605, 606.

The analysis of water, foods, feeds, alloys, rocks, and cements. The

materials analyzed vary from year to year. Two three-hour laboratory periods each week.

CHEMISTRY 611-612: *Theoretical and Physical Chemistry.* For each, four hours. First and second semesters. Prerequisites, Chemistry 606, Physics 502, and Mathematics 601.

The fundamental principles of chemistry and physics are studied, with special emphasis upon the application of these in the correlation of natural phenomena. In the laboratory, molecular weight determinations, and measurements of the velocity of chemical reaction, viscosity, surface, tension, etc., are made. Three hours of lecture and discussion and one three-hour laboratory period each week.

CHEMISTRY 620: *Agricultural Analysis.* Three hours. First semester. Prerequisite, Chemistry 401, 402. Registration for this course is confined to students of Agriculture.

The underlying theories involved in agricultural chemistry; the principles and practice of quantitative analysis of materials related to agriculture. The theory will be illustrated by solving various types of problems. One hour of lecture and two three-hour laboratory periods each week.

CHEMISTRY 630: *Theoretical and Physical Chemistry.* Four hours. Prerequisite, Chemistry 602 or 606. Calculus not required. For pre-medical students and others not majoring in chemistry or chemical engineering.

Classroom and laboratory study of the fundamental principles of chemistry and physics, with special reference to the application of these in the correlation of natural phenomena.

CHEMISTRY 701: *Organic Preparations.* Two hours. First semester. Prerequisites, Chemistry 601, 602. (Not offered in 1947-48.

Training in the methods of carrying out important organic reactions for the preparation of pure compounds, using larger amounts and greater refinements than in Chemistry 601, 602. Two three-hour laboratory periods each week.

CHEMISTRY 702: *Qualitative Organic Analysis.* One hours. First semester. Prerequisite or parallel, Chemistry 701. (Not offered in 1947-48)

A laboratory study of the class reactions of carbon compounds and practice in the methods of identifying unknown substances. One three-hour laboratory period each week.

CHEMISTRY 703: *Quantitative Organic Analysis.* Two hours. Second semester. Prerequisite or parallel, Chemistry 701. (Not offered in 1947-48)

The determination of carbon, hydrogen, nitrogen, sulfur, phosphorus, and the halogens in organic substances, embodying standard methods of ultimate analysis by the use of the combustion and bomb furnaces. Two three-hour laboratory periods each week.

CHEMISTRY 707-708: *Advanced Quantitative Analysis.* For each, three hours. First and second semesters. Prerequisites, Chemistry 605, 606.

A study of the principles of quantitative analysis and of modern an-

alytical procedures, including certain physico-chemical methods; the analysis of carbonates, silcates, alloys, and ores. Numerous problems are required. One hour of lecture and two three-hour laboratory periods each week.

CHEMISTRY 710: *Colloid Chemistry.* Three hours. Second semester. Prerequisites Chemistry 611, 612.

Lectures, recitations, and assigned readings on the preparation and properties of colloids, and practical applications of the chemistry of colloids. Three hours of lecture and discussion each week.

CHEMISTRY 711: *Chemical Thermodynamics.* Three hours. First semester. Prerequisites, Chemistry 611, 612.

The application of the laws of thermodynamics to chemical and chemical engineering problems; the laws of chemical equilibrium, and the changes in free energy and entropy attending chemical and physico-chemical changes. Three hours of lecture and discussion each week.

CHEMISTRY 713: *Theoretical Electrochemistry.* Three hours. First semester. Prerequisites, Chemistry 611, 612. (Not offered in 1947-48)

Lectures, discussions, and assigned readings on the modern theories of solutions, electrode phenomena, polarization, electrolysis, homogeneous equilibria. Three hours of lecture and discussion each week.

CHEMISTRY 714: *Applied Electrochemistry.* Three hours Second semester. Prerequisites, Chemistry 611, 612. (Not offered in 1947-48)

A study of primary and secondary cells, electroplating, electrometallurgy, electroanalysis, and of the construction and operation of electric furnaces for metallurgical and non-metallurgical processes. Three hours of lecture and discussion each week.

CHEMISTRY 715: *History of Chemistry.* Two hours. First semester. Prerequisites, Chemistry 601, 602, 611, 612. (Not offered in 1947-48)

This course is intended to cover the historical development of the science. An attempt is made to give the student some knowledge of the individuality of the men whose work has resulted in the growth and development of modern chemistry. Consideration will be given to the relation of chemistry to other sciences during the course of its development. Two hours of lectures and recitation each week.

CHEMISTRY 716-717: *Chemistry Seminar.* For each, one hour. First and second semesters. Prerequisite, junior standing in Chemistry or Chemical Engineering. (Not offered in 1947-48)

Assigned reading and reports on original articles in current chemical literature of French as well as English and American journals. One hour each week.

Department of English and Foreign Languages

HERBERT L. HUGHES, PROFESSOR OF ENGLISH AND HEAD OF THE DEPARTMENT.

ENGLISH: PROFESSOR H. J. SACHS; ASSOCIATE PROFESSORS ALMA BURK, FRELLSEN F. SMITH, MILDRED WALKER, EUNICE COON WILLIAMSON; ASSISTANT PROFESSORS WINNIE D. EVANS, MARY FRANCES FLETCHER; ACTING INSTRUCTORS LOUISE MORGAN, BESS CRIDER PENICK, BETTY SMITH YODER.

FRENCH: ASSOCIATE PROFESSOR EGUENIA H. SMITH; ASSISTANT PROFESSOR KATHLEEN DECOU THAIN.

SPANISH: PROFESSOR FRANCIS O. ADAM, JR.; ASSISTANT PROFESSOR KATHLEEN DECOU THAIN.

SPEECH: ASSOCIATE PROFESSORS VERA ALICE PAUL, MERRILL WARD McCLATCHEY; ASSISTANT PROFESSOR WILMA BAUGH; ACTING INSTRUCTOR EILEEN PHELPS.

REQUIREMENTS FOR A MAJOR AND MINOR

Each student who majors in the department is required to follow the curriculum for English, French, Spanish or Speech. Not later than the end of his sophomore year he must, with the approval of the head of the department, choose his major and minor study and the rest of his program of work for his junior and senior years. A *major in English or Speech* consists of thirty hours. A minor consists of twenty-one hours. A *major in French* consists of eighteen semester hours in courses number 550 or above. A major in Spanish consists of eighteen semester hours in courses number 600 or above. A minor in French or Spanish consists of 21 hours.

REQUIREMENTS FOR A MINOR IN THE DEPARTMENT FOR STUDENTS IN OTHER DEPARTMENTS

Minor in English: 21 semester hours.

Minor in French: 15 semester hours in addition to French 401, 402 or equivalent.

Minor in Spanish: 9 semester hours of courses in 600 group, plus prerequisites to these courses—21 semester hours.

Minor in Speech: 21 semester hours.

DESCRIPTION OF COURSES

ENGLISH

ENGLISH 401 (or 400)—402: *Freshman English—Reading, Writing, Speaking, Use of the Library.* Three hours each. English 401 is prerequisite to 402. Required of all students.

The main objective of the course is to train the student to read, speak and write correctly and effectively and to use books with efficiency and pleasure. The subject matter and requirements of the course are chiefly the following: study of the forms of discourse; use of the library; writing of paragraphs, themes, letters; making of outlines; precis writing; making oral and written reports; word study; reading; review of punctuation, spelling, grammar; individual conferences with the instructor.

NOTE: A placement test in English is given all entering freshmen. Those who on this test show that they are deficient in grammar, spelling, or punctuation are required to take English 400, which meets five times a week, instead of three, but which covers the same work as English 401. Those who complete English 400 will proceed into 402 just as do those who complete 401.

ENGLISH 501, 502: *Sophomore English—English and American Literature.* Three hours each. English 402 prerequisite to 501 or 502.

This course is for the general student, and only such material is included as will serve his needs and interests. English 501 is a study of selections exclusively from the greatest English writers, beginning with Shakespeare and ending with the present. English 502 is a study of selections exclusively from the major American writers, beginning with Irving and ending with the present. By such a course of study it is intended to introduce the student to the major writers of our literature, furnish him with such literary backgrounds as are necessary to make him a discriminating and intelligent reader, and create in him, if possible, a taste for the best literature, whether of the present or past.

ENGLISH 603: *Technical English.* Three hours. Prerequisite, English 502.

A course primarily for engineering students. A study of reports, letters, and other kinds of technical writing, and practice in writing these.

ENGLISH 606: *Advanced Composition — Exposition.* Three hours. Prerequisite, English 402.

A course designed primarily for those students who need more practice in writing than is afforded in Freshman English.

ENGLISH 608: *The Short Story.* Three hours. Prerequisite, English 501 or 502.

The technique of the short story; literary appreciation. Opportunity given to write the short story for those who desire to; but none are required to write stories.

ENGLISH 609: *Parliamentary Law.* One hour. Open to all students.

Theory and practice in parliamentary usage; how to form and conduct organizations; how to preside, make motions, transact business, etc.; constant drill and practice illustrating the rules and principles studied.

ENGLISH 610: *The English Novel.* Three hours. Prerequisite, English 502.

Chief English novels and novelists from the beginning to the present.

ENGLISH 614: *English Poetry of the Nineteenth Century.* Three hours. Prerequisite, English 502.

A study of Romanticism and other nineteenth century literary de-

velopments, and of nineteenth century English thought: Wordsworth, Byron, Shelley, Keats, Tennyson, Browning, Swinburne, Rossetti, and Meredith.

ENGLISH 618: *Shakespeare.* Three hours. Prerequisite, English 501 or 502. Required of all English majors and prospective English teachers.

A study of selected plays. Attention to speaking Shakespeare's lines.

ENGLISH 619: *Contemporary Drama.* Three hours. Prerequisite, English 501 or 502.

The chief characteristics of contemporary drama—European, English, and American. Opportunity is afforded for writing plays, but playwriting is not required. Attention to the technique of the motion picture.

ENGLISH 621: *Comparative Literature.* Three hours. Prerequisite, English 502.

A study of selected classics of foreign literature in translation, particularly those masterpieces which have influenced English literature.

ENGLISH 622: *The English Language.* Three hours. Required of English majors and prospective English teachers. Prerequisite, English 502.

A study of the important aspects of English as a language in order to aid students in a better use of English through knowledge of its fundamental laws. Included in the study are language families, language fashions, slang, vocabulary, grammar, spelling, pronunciation, language psychology, correct usage, etc.

ENGLISH 624: *Biography.* Three hours. Prerequisite, English 501 or 502.

A study of the art of biography as it is revealed in the great biographies of English and American literature. The reading of selected biographies.

ENGLISH 625: *Contemporary English and American Poetry.* Three hours. Prerequisite, English 501 or 502.

A brief survey of English and American poetry of the twentieth century.

ENGLISH 627: *The American Novel.* Three hours. Prerequisite, English 501 or 502.

The chief American novelists from the beginning to the present.

ENGLISH 632: *Advanced English Grammar.* Three hours. Prerequisite, English 502. Required of prospective English teachers.

An intensive study of English grammar and of the fundamentals of the teaching of English in the high schools.

ENGLISH 634: *College Grammar.* Three hours credit. Prerequisite, English 501 or 502.

An intensive course in English grammar. For non-English majors who need further study of grammar. Prospective English teachers and majors in English who may desire to take a grammar course should take English 632.

ENGLISH 703: *Aesthetics and Literary Criticism.* Three hours. Prerequisite, English 501, 502 and at least two advanced courses in English.

A study of the critical theories of the great literary critics. The application of these theories to certain of the classics of English and American literature. Study of aesthetics as related to literature.

FRENCH

(See French Curriculum)

NOTE: The following changes have been made in French course numbers: French 501, 502 in the 1945-46 catalogue were numbered 411, 412 and prior to 1945-46 were numbered 501, 502 as at present; French 550, 551 in the 1945-46 catalogue were numbered 501, 502 and prior to 1945-46 were numbered 601, 602.

FRENCH 401-402: *Elementary French.* Six hours. For beginners.

FRENCH 501: *Intermediate French.* Three hours. Prerequisite, French 402 or two years of high school French. Reading, conversation, composition.

FRENCH 502: *Intermediate French.* Three hours. Prerequisite, French 501. A reading course.

FRENCH 503: *The Reading of Scientific French.* Three hours. Prerequisite, French 501. *For science majors and premedical students only.*

FRENCH 550: *French Grammar.* Three hours. Prerequisite, French 502, or four years of high school French. Required of French majors.

FRENCH 551: *The French Short Story.* Three hours. Prerequisite, French 502 or four years of high school French. Required of French majors.

FRENCH 600: *Phonetics and Conversation.* Three hours. Prerequisite, French 550 or 551, or permission of the instructor. Required of French majors.

FRENCH 605: *Contemporary French Fiction.* Three semester hours. Prerequisite, French 551.

FRENCH 620-621: *Introduction to French Literature.* Six semester hours. Prerequisite, French 551.

FRENCH 700: *Modern French Drama.* Three semester hours. Prerequisite, French 620-621 or permission of the instructor.

SPANISH

(See Spanish Curriculum)

SPANISH 401-402: *Elementary Spanish.* Six hours. Prerequisite, freshman standing. No credit for 401 unless 402 is taken.

Reading and grammar; pronunciation; elementary conversation.

SPANISH 501-502 (formerly 411, 412): *Intermediate Spanish.* Six hours. Prerequisite, Spanish 402, two years of high school Spanish, or equivalent. 501 prerequisite to 502.

Rapid reading of standard Spanish prose. Comprehension of spoken Spanish; oral practice. By the end of the course the student is expected to be able to read standard Spanish without aid of a dictionary or other vocabulary.

SPANISH 516: *Commercial Spanish.* Three hours. Prerequisite, Spanish 502 or permission of instructor.

Study of common commercial forms for use in Spanish correspondence and business.

SPANISH 551-552: *Survey of Spanish Literature.* Six hours. Prerequisite Spanish 502 or consent of instructor.

A study of literary types from earliest days of Spanish literature to modern times. Reading of representative works.

SPANISH 601-602: *Conversation and Composition.* Six hours. Required for major in Spanish. Prerequisite, Spanish 552 and 603-604 or 605-606 or consent of instructor.

Conversation on everyday topics; themes.

SPANISH 603-604: *The Novel in Spain.* Six hours. Prerequisite, Spanish 552, or consent of instructor. Given in alternating years.

A study of the novel in Spain from the sixteenth century to modern times. Reading of outstanding examples.

SPANISH 605-606: *The Drama in Spain.* Six hours. Prerequisite, Spanish 552 or consent of instructor. Given in alternating years. (Given in 1947-1948)

A study of the drama in Spain from the sixteenth century to modern times. Reading of outstanding examples.

SPANISH 607: *The Novel of Latin America.* Three hours. Prerequisite, Spanish 552, or consent of the instructor. Summer school only.

A study of representative novels of Latin America, Mexico excepted.

SPANISH 625: *The Novel in Mexico.* Three hours. Prerequisite, Spanish 552, or consent of instructor. Summer school only.

A study of outstanding novels from 1880 to contemporary times.

SPEECH

SPEECH 410: *Principles of Speech.* Three hours. Open to freshmen and sophomores.

Elementary speech training designed to meet the individual needs of the student. The aim of the course is to correct poor speech habits, develop serviceable ones.

SPEECH 511: *Principles of Speech.* A continuation of 410. Three hours. Required of majors and minors. Prerequisite, Speech 410.

Purpose: To strengthen the speech patterns built up in the previous course. Abundant opportunity given for students to participate in group discussions, to give talks before the group, and to read orally. It is strongly advised that 511 follow 410 as closely as possible.

SPEECH 612: *Public Speaking.* Three hours. Prerequisite, Speech 410; advised, Speech 511.

Designed to give more advanced experience in speech composition and delivery for varied situations.

SPEECH 613: *Public Speaking.* Three hours.

Continuation of 612. Types of speech, such as oratory, radio, after-dinner, are studied and practiced. Prerequisite, 410; advised 511 and 612.

SPEECH 615: *The Oral Interpretation of Literature.* Three hours. Prerequisite, Speech 410.

The purpose is two-fold: To teach students to get from the printed page the meaning that lies upon it, and to give that meaning sincerely and convincingly to the audience. The material used for interpretation will be taken from contemporary writers.

SPEECH 616: *Oral Interpretation of Literature.* Three hours. Prerequisites, Speech 410, 615.

A continuation of Speech 615. The material used for interpretation will be mainly from English and American classics.

SPEECH 619: *Choral Speaking.* One hour. Prerequisite, Speech 410.

The aim of the course is to give an opportunity for group participation in the interpretation of literature.

SPEECH 620: *Interpretation of Children's Literature.* Three hours. Prerequisite, Speech 410.

Arranged for grade teachers. Study of technique and practice in story telling, in oral reading of both prose and poetry, and in group reading.

SPEECH 625: *Speech Personality.* Two hours. Prerequisite, Speech 410 or its equivalent.

This course is designed to give individuals seeking professional training opportunity to gain speech skill in actual life situations, to improve personality, and develop leadership.

SPEECH 650: *Speech in Radio Broadcasting.* Three hours. Prerequisite, Speech 410; advised, Speech 615.

Fundamentals of radio speaking with practice before the microphone. Actual broadcasting experience for those qualified.

SPEECH 651: *Speech in Radio Broadcasting. Three* hours. Continuation of 650.

Practice in writing and participating in special forms of radio programs.

SPEECH 700: *Acting.* Three hours. Prerequisite, Speech 410; advised, Speech 615 and 616.

Purpose: To develop techniques for the interpretation of drama through the medium of the actor. Students will both play and direct.

SPEECH 701: *Stagecraft.* Three hours. No prerequisite; advised, Speech 700 and Art 564.

Designed to develop techniques for the interpretation of drama through the media of scenery, costume, and light.

SPEECH 710: *Speech Correction.* Three hours. Prerequisite, Speech 410.

Especially for speech majors and elementary teachers. Study of the nature and treatment of various types of speech defects. Students registered in the course will be given some clinical experience.

SPEECH 720: *Creative Dramatics.* Three hours. Prerequisite, Speech 410; advised, Speech 620.

Planned for the elementary teacher. Consists of two hours of laboratory. Purpose: To help teachers to direct children in their dramatic expression, both in plays they make themselves and in plays that are not original.

SPEECH 750: *Discussion and Debate.* Three hours. Prerequisite, Speech 410 or equivalent; advised 511.

Study of the principles of argumentation and group discussion.

SPEECH 751: *Discussion and Debate* continued. Three hours. Prerequisite, Speech 410 or equivalent; advised, 511 and 750.

Application of the principles studied in Speech 750 to various types of group discussion.

SPEECH 755: *Make-up.* One hour. No prerequisite.

Study and application of principles of make-up for the stage.

DEBATE: One hour. Prerequisite, sophomore standing. Open only to students whose total load (including the debate course) is not over eighteen hours.

A course designed to afford practical experience in debate and other forms of forensics. Class meets twice a week. This course does not overlap the work of Speech 750 and 751 but is supplementary to it.

Department of Health and Physical Education For Men

G. B. HOGG, PROFESSOR AND HEAD OF THE DEPARTMENT
PROFESSOR L. P. McLANE; INSTRUCTOR HUEY WILLIAMSON

The Department of Health and Physical Education for Men has four major objectives: (1) to provide service courses to meet the college requirements for graduation; (2) to provide courses to meet the requirements of the State Department of Education for certification of teachers; (3) to provide a curriculum to train teachers in Health and Physical Education leading to the B.S. degree; (4) to promote and stimulate student interest in wholesome recreational activities.

All men students are required by the college to complete eight semester hours of physical activities. Students who, because of physical defects, cannot take the required courses must take a restricted program of activities (Physical Education 405-406) planned to meet the individual need of the student.

All activity courses meet three clock hours per week. Only one course may be taken at one time. A regulation gym suit is required for participation in activity courses. Each male student must have a record of physical examination by his family physician stating condition of heart and respiratory system.

All returning service men are required to take Physical Education 720. This course is open to all students wishing to participate in recreational activities—camping, boating, bicycling, hiking, fishing, golf, etc. Students are allowed to choose their own activities subject to the approval of the department head.

All of those who expect to teach in high school are required to complete the minimum of eight semester hours. The following courses will satisfy these requirements: Physical Education 401, 402, 500, 501, 502, 621.

All elementary school teachers are required to complete the minimum of 12 semester hours. For men, the following courses will satisfy these requirements: Physical Education 401, 402, 500, 501, 502, 621, 605, 641.

MAJORS IN HEALTH AND PHYSICAL EDUCATION FOR MEN

Graduation for majors in Physical Education is based on the following conditions and requirements:

1. A total of 132 hours, and a total of 132 quality points.

2. The satisfactory completion of the requirements of preparation for teaching in two fields. Some desirable combinations in teaching majors are:

Physical Education and Science.

Physical Education and Mathematics.

Physical Education and Social Science.

Majors in Health and Physical Education for Men are required to complete 41 semester hours. Required courses for men: Health and Physical Education 401, 402, 408, 490, 420, 500, 501, 502, 507, 508, 570, 571, 572, 573, 590, 604, 605, 620, 621, 626, 641, 704, and Biology 625.

Electives for majors in Health and Physical Education: Health and Physical Education 606, 608, 612, 614, 623, 705, 714, 720.

A student majoring in Health and Physical Education for Men should select, by the beginning of the second semester of his freshman year, his second teaching field. Certain basic courses are required, and the electives should generally be concentrated in one of the following fields: science-mathematics, or social science. Such concentration upon electives will prepare prospective coaches for two teaching fields. Electives should be carefully chosen after consultation with the head of the department. See also curriculum for majors in Physical Education elsewhere in catalogue.

SEQUENCE IN SUBJECT MATTER FIELDS OF TEACHING MAJORS

Science, 12 semester hours, with 12 semester hours electives or a total of 24 semester hours.

Zoology 401, 402. Chemistry 407, and Physics 504. Electives Zoology 610, 403, or 620, 625 and Chemistry 408.

Mathematics, 12 hours with six hours electives or a total of 18 hours. Mathematics 401, 402 or 405, 406 and 403, 419.

Social Science, 24 semester hours.

History, 501, 502, Political Science 501, 603, Sociology 501, 612, Economics 501.

MINOR IN HEALTH AND PHYSICAL EDUCATION

(For students in other departments)

Students who minor in Health and Physical Education for Men are required to complete 21 hours, 11 of which must be Biology 401 and 402, or 403 and 625.

DESCRIPTION OF COURSES

PHYSICAL EDUCATION 401: *First Semester Sport Activities.* (Touch football, Socceer, Speed ball, Basketball) One hour credit.

Fundamental techniques, rules, and team play.

PHYSICAL EDUCATION 402: *Second Semester Sport Activities.* (Volley ball, Boxing, Soft ball) One hour credit.

Fundamental techniques, rules, and team play.

PHYSICAL EDUCATION 406: *Corrective Physical Education.* One hour each semester.

This course is for those who are not able to take Physical Education 401-402 and 501-502. Emphasis will be placed on the correction of kyphosis, lordosis, scoliosis, etc.

PHYSICAL EDUCATION 407: *Sports Appreciation.* One hour credit. Two hours recitation.

PHYSICAL EDUCATION 408: *Tumbling, Pyramids, and Apparatus.* One hour.

The technique and practice of progressive elementary exercise in tumbling and with heavy apparatus; elementary training in floor and parallel bar pyramids.

PHYSICAL EDUCATION 420: *Principles and History of Physical Education.* Two hours.

A study of historical background and an analysis of the basic principles of health and physical education.

PHYSICAL EDUCATION 490: *Introduction to Physical Education.* Two hours.

This course covers the organization and requirements for a comprehensive general course in Physical Education. The course is of special value in work designed to accomplish a professional orientation of physical education for students.

PHYSICAL EDUCATION 500: *Health and Safety Education.* Three hours.

A course designed to meet the health and safety education requirements of the state for all teachers.

PHYSICAL EDUCATION 501: *Third Semester Sports Activities.* (Speed ball, Socceer, Touch football, Basketball) Fundamentals, rules, and team play. One hour credit.

PHYSICAL EDUCATION 502: *Fourth Semester Sports Activities.* (Boxing, Soft ball, Volley ball) One hour credit. Fundamentals, rules, and team play.

PHYSICAL EDUCATION 507: *Elementary Instruction in All Minor Sports.* Two hours. Two hours lecture, one hour laboratory. Required of all majors in Physical Education.

PHYSICAL EDUCATION 508: *Materials and Methods and Participation in Minor Sports.* Two hour.

PHYSICAL EDUCATION 570: *Golf.*

PHYSICAL EDUCATION 571: *Tennis.* One hour.

This course includes the practice of the various techniques of the game and the rules.

PHYSICAL EDUCATION 572: *Badminton.* One hour.

The course includes the practice of the various techniques of the game and the rules involved.

PHYSICAL EDUCATION 573: *Archery.* One hour.

Fundamentals of shooting and instruction in the choice of equipment.

PHYSICAL EDUCATION 590: *Applied Anatomy.* Three hours.

A study of the structure of the human skeleton and viscera, muscles, joints, and ligaments; general physiological processes of man, involving circulation, respiration, muscles, nerves, sense organs, and nutrition.

PHYSICAL EDUCATION 601: *Fifth Semester Sports Activities.* One hour credit. Rules and officiating in team play.

PHYSICAL EDUCATION 602: *Sixth Semester Sports Activities.* One hour credit. Rules and officiating in team play.

Fundamental drills, participation, and sports activities are included in the team sports.

PHYSICAL EDUCATION 604: *Organization and Administration of Intramural Sports.* Three hours.

This course covers the organization and administration of high school and college intramural programs. The student is required to assist in the organization and administration of the intramural program at Tech.

PHYSICAL EDUCATION 605: See description under Physical Education for Women.

PHYSICAL EDUCATION 606: *Principles and Practices in Football Coaching.* Three hours.

This course is designed to familiarize the student with various offensive seystems that are used by various coaches.

PHYSICAL EDUCATION 608: *Principles and Practices of Baseball Coaching.* Two hours.

Fundamentals: (1) throwing, batting, and fielding; (2) position play; (3) offensive and defensive team strategy; (4) training and practices; (5) officiating.

PHYSICAL EDUCATION 612: *Principles and Practices in Basketball Coaching.* Two hours.

Fundamentals of team offense and defense. Training and practice; scouting and strategy; officiating.

PHYSICAL EDUCATION 614: *Principles and Practices in Track and Field.* Two hours.

Fundamental movements involved in the different events; (1) staffing for the different events; (2) training and practice; (3) officiating.

PHYSICAL EDUCATION 620: *Organization and Administration of Physical Education.* Three hours.

A treatment of the practical factors involved in administering the large unit of health and physical education, including tests and measurements utilized in evaluating results.

PHYSICAL EDUCATION 621: *First Aid.* One hour. Each semester.

Lectures, discussions, and practical demonstrations of Red Cross methods in first aid.

PHYSICAL EDUCATION 623: *Athletic Management.* Two hours. Open to Physical Education majors only.

PHYSICAL EDUCATION 626: *Kinesiology.* Three hours. Prerequisite, Zoology 625. See Physical Education for Women.

PHYSICAL EDUCATION 641: *Materials and Methods in Health and Safety Education.* Two hours.

PHYSICAL EDUCATION 701: *Seventh Semester Sports Activities.* One hour credit. Rules and officiating in team play.

PHYSICAL EDUCATION 702: *Eighth Semester Sports Activities.* One hour credit. Rules and officiating in team play.

PHYSICAL EDUCATION 704: *Organization and Administration of Recreational Activity Programs.* Three hours.

Problems, methods and procedures in the organization and administration of recreational and vocational activities in community centers, playgrounds, clubs, churches, scouting and industry.

PHYSICAL EDUCATION 705: *Athletic Injuries, Prevention, Diagnosis, and Treatment.* Two hours. Open to Physical Education majors only.

A course for men and women in the prevention, diagnosis, and treatment of injuries in the gymnasium and on the athletic field.

PHYSICAL EDUCATION 720: *Recreation.* One hour. No prerequisite.

This course is open to all returned service men wishing to participate in recreational activities — camping, boating, bicycling, hiking, fishing, folf, etc. Students registering in this course will be required to participate in the above activities at a minimum of 36 hours per semester and a maximum of 60 hours per semester under the supervision of the Health and Physical Education Department.

Department of Health and Physical Education For Women

JULIA DUKE, PROFESSOR AND HEAD OF THE DEPARTMENT
ASSISTANT PROFESSORS STELLA WHALEY GARRISON, MINNIE E. RATLIFF, EDNA YARBROUGH; INSTRUCTOR JEAN EDMISTON HICKMAN

The Department of Health and Physical Education for Women is set up to perform the following services:

1. Provide service courses to meet the four hours required by the college for graduation.
2. Provide courses to meet requirements of the State Department of Education for certification of teachers.
3. Provide a curriculum to train teachers in Health and Physical Education leading to the B.S. degree in the School of Education.

All students are required to complete four semester hours of activity work in Physical Education, this work to be completed by the end of the sophomore year.

Freshman year: Select two from 412-417.

Sophomore year: Select on from 530, 540, 560, 561.
Select one from 570-582 or 421.
Elementary majors—430 and 521.

All students majoring in Physical Education are required to attend at least one summer session and take at least one course in swimming. It is recommended that this be before the junior year; special permission should be secured from the head of the department if it is necessary to postpone this.

Many of the courses listed under the service program are open to and required of majors in Physical Education. This is especially true of some of the rhythms courses and all of the individual sports.

All students who expect to teach must take the following courses in addition to the four hours listed above (a total of eight hours in Health and Physical Education): Physical Education 500 and 621.

All students in Elementary Education must complete twelve hours in Health and Physical Education, including the four hours of activity work listed above. Other required courses: Physical Education 500, 621, 640, and 641.

DEPARTMENTAL REGULATIONS

Physical Examinations. Every woman student is required to have a thorough physical examination by her family physician *each year.* A record of this should be presented

to the head of the Department of Health and Physical Education for Women, to be kept on file.

Record blanks should be secured from the Guidance Counselor, the Dean of Women, or the Department of Physical Education for Women.

Costume. Each girl who is registered for an activity class in Physical Education is expected to have white tennis shoes and socks and a gymnasium uniform, to be bought after she arrives at college.

DESCRIPTION OF COURSES

Courses numbered in the 400's are open to freshmen, those numbered 500 and above are open to sophomores and upper class students.

PHYSICAL EDUCATION 410, 411: *Restricted Activities.* One hour. Throughout year.

For girls not physically able to take the regular courses.

PHYSICAL EDUCATION 412: *Soccer.* One hour.

Fundamental techniques, rules and team play.

PHYSICAL EDUCATION 413: *Basketball.* One hour.

Fundamental techniques, rules, and team play.

PHYSICAL EDUCATION 413Ad: *Advanced Basketball.* One hour. Prerequisite, Physical Education 413 or a knowledge of the basic skills, techniques and rules of basketball.

PHYSICAL EDUCATION 414: *Volley Ball.* One hour.

Fundamental skills, rules, and team play.

PHYSICAL EDUCATION 415: *Softball.* One hour.

Fundamental game skills, rules, and team play.

PHYSICAL EDUCATION 416: *Fieldball and Speedball.* One hour.

Fundamental game skills, team play, and rules.

PHYSICAL EDUCATION 417: *Field Hockey.* One hour.

Fundamental game skills, team play and rules.

PHYSICAL EDUCATION 421: *Recreational Sports.* One hour.

Instruction in darts, table tennis, shuffleboard, horseshoes, ring tennis, croquet, mass badminton, and other games.

PHYSICAL EDUCATION 430: *Games of Low Organization.* One hour.

Materials are presented and practice given in methods of teaching.

PHYSICAL EDUCATION 500: See course description under Department of Health and Physical Education for Men. Three hours.

PHYSICAL EDUCATION 510-511: *Restricted Activity.* One hour.

A continuation of 410-411 for girls not physically able to take part in sports and rhythms.

PHYSICAL EDUCATION 520: *Rhythms for the Elementary Grades.* One hour.

This course includes singing games, free activities, creative rhythms, folk dances, and dramatizations for the grades from kindergarten through the sixth grade. Materials are presented and practice given in the methods of teaching.

PHYSICAL EDUCATION 530: *Fundamentals of Modern Dance.* One hour.

PHYSICAL EDUCATION 531: *Advanced Modern Dance and Composition.* One hour. Prerequisite, Physical Education 530.

PHYSICAL EDUCATION 532: *Dance Composition.* One hour. Prerequisite, Physical Education 531. May be repeated for credit.

PHYSICAL EDUCATION 540: *Folk Dancing.* One hour.

PHYSICAL EDUCATION 545: *Social Dancing.* One hour.

OPEN ONLY TO STUDENTS WHO DO NOT KNOW HOW TO DANCE. This course offers the fundamental social dance steps, beginning with the dance walk and continuing to the foxtrot, two step, waltz, and the turns for these basic steps. Open to both men and women. May be taken only as an elective; it will not be accepted as part of the requirement for the basic activity courses.

PHYSICAL EDUCATION 550: *Tumbling and Pyramids.* One hour.

PHYSICAL EDUCATION 560: *Tap Dancing.* One hour. Open to men and women students.

PHYSICAL EDUCATION 560Ad: *Advanced Tap Dancing.* One hour. Prerequisite, Physical Education 560 or a knowledge of the basic skills and techniques.

PHYSICAL EDUCATION 561: *American Country Dances.* One hour.

Circle, quadrille, and longways dance forms that are a part of the American Country Dance. Open to men and women.

PHYSICAL EDUCATION 570: *Golf.*

PHYSICAL EDUCATION 571: *Tennis.* One hour.

This course includes the practice of the various techniques of the game and the rules.

PHYSICAL EDUCATION 571Ad: *Advanced Tennis.* One hour. Prerequisite, Physical Education 571 or a knowledge of the basic skills and techniques.

PHYSICAL EDUCATION 572: *Badminton.* One hour.

The course includes the practice of the various techniques of the game and the rules involved.

PHYSICAL EDUCATION 573: *Archery.* One hour.

Fundamentals of shooting and instruction in the choice of equipment.

PHYSICAL EDUCATION 580: *Beginning Swimming.* One hour.

PHYSICAL EDUCATION 581: *Intermediate Swimming.* One hour. Open to men and women.

PHYSICAL EDUCATION 582: *Advanced Swimming and Water Safety.* One hour. Open to men and women.

PHYSICAL EDUCATION 621: *First Aid.* One hour.

Lectures, discussions, and practical demonstrations of Red Cross methods in first aid.

PHYSICAL EDUCATION 640: *Methods and Materials in Physical Education for Elementary Schools.* Two hours. Prerequisite, Physical Education 520 and 430, or 521, and two additional semesters of activity.

Planned to satisfy the requirements for elementary school teachers, and required of all majors.

PHYSICAL EDUCATION 641: (See course description under Department of Health and Physical Education for Men.)

COURSES FOR MAJORS IN PHYSICAL EDUCATION

PHYSICAL EDUCATION 403: *Team Sports.* One hour.

Fundamentals of sports, and intensive study of rules, play, etc. The class meets four times a week for activity and one time for lecture.

PHYSICAL EDUCATION 404: *Team Sports.* One hour.

Fundamentals of sports, and intensive study of rules, play, etc. The class meets four times a week for activity and one time for lecture.

PHYSICAL EDUCATION 500: See course description under Health and Physical Education for Men.

PHYSICAL EDUCATION 503, 504: *Sports.* One hour.

A continuation of study of sports techniques, practices in skill, etc., begun in the freshman year. Four times a week for activity and one hour for lecture.

PHYSICAL EDUCATION 521: *Games of Low Organization.* Two hours.

Course similar to Physical Education 430 but planned for major students and requiring outside study, notebooks, etc.

PHYSICAL EDUCATION 540M: *Folk Dancing.* One hour.

Special section for women majors.

PHYSICAL EDUCATION 550M: *Tumbling.* One hour.

Special section for majors.

PHYSICAL EDUCATION 605: *Methods and Materials in Health Education.* Three hours.

PHYSICAL EDUCATION 610: *History and Principles of Physical Education.* Three hours. Prerequisite, junior standing.

A course designed especially for Health and Physical Education majors.

PHYSICAL EDUCATION 611: (Formerly 601) *Basketball Coaching.* Two hours. Prerequisite, Physical Education 404, or 413.

Study of fundamental skills, team offense and defense, coaching principles and officiating. Open to non-majors by permission of the instructor.

PHYSICAL EDUCATION 613: (Formerly 603) *Technique in Team Sports.* Three hours. Prerequisites, Physical Education 403, 404, and 503, 504.

Study of team sports from viewpoint of teacher and coach.

PHYSICAL EDUCATION 620: See course description under Department of Physical Education for Men.

PHYSICAL EDUCATION 621: *First Aid. One hour.* See service curriculum.

PHYSICAL EDUCATION 626: *Applied Anatomy and Kinesiology.* Three hours. Prerequisite, Biology 625.

This course includes the theory of body movement in relation to Physical Education activities.

PHYSICAL EDUCATION 631: *Festivals and Pageantry.* Two hours. Open to non-majors by permission of the instructor.

PHYSICAL EDUCATION 640: (See service courses)

PHYSICAL EDUCATION 660: *Introduction to Community Recreation.* Three hours.

Department of Journalism

KENNETH F. HEWINS, PROFESSOR AND HEAD OF THE DEPARTMENT
ASSISTANT PROFESSOR E. W. CARSWELL

REQUIREMENTS FOR A MAJOR IN JOURNALISM

Of the thirty-one semester hours required for a major in Journalism, twenty-two must be in advanced Journalism courses numbered in the 600 series. The other nine hours required include English 401 and English 402 *(Freshman Composition)* and English 634 *(Advanced Grammar)*, or, in lieu of the latter, another course in English approved by the head of the department.

For a minor, the student must complete 21 hours in a subject related to Journalism. Junior and senior courses in such fields as English are recommended as a minor with a Journalism major, although other subjects, such as the social sciences, may be selected upon approval of the Dean of the School of Arts and Sciences and the department head.

Proficiency in spelling and grammar is essential to successful newspaper work. Students weak in those subjects are discouraged from enrolling in Journalism as a major.

REQUIREMENTS FOR A MINOR IN JOURNALISM

(For students in other departments)

Eighteen hours of advanced Journalism courses, numbered in the 600 series, may constitute a minor in Journalism.

MECHANICAL AIDS TO JOURNALISM

THE PRINTING PLANT

Opportunity for observation and experience in printing processes and other phases of the mechanics of publishing is available to the Journalism students through a modern and well-equipped printing plant maintained by the college. Two linotype machines, a wide variety of foundry-cast type, presses, and other up-to-date equipment are included in the print shop.

THE ENGRAVING PLANT

The college maintains a photo-engraving plant by means of which students may learn the fundamentals of the process of producing plates for newspaper reproduction.

THE COLLEGE NEWSPAPER

Practical experience in newspaper work is afforded the

Journalism students through their work as staff members on *The Tech Talk*, the college newspaper. In addition to their editorial work on the newspaper staff, the Journalism students are encouraged to gain practical mechanical experience through page make-up, etc.

DESCRIPTION OF COURSES

JOURNALISM 501: *News Writing.* Three hours. Prerequisite, English 402.

Beginning course in news writing. Theoretical study of newspaper style and mechanical terms, supplemented by work on the college newspaper. In addition to benefiting journalism students, this course is planned as an aid to education students preparing to supervise publications in connection with their teaching duties and to agriculture students seeking some training in the writing of articles for weekly newspapers or trade journals.

JOURNALISM 610: *Copy Editing.* Three hours. Prerequisite, Journalism 501.

Course dealing with methods of editing copy and the writing of headlines. Theory supplemented by work on the college newspaper.

JOURNALISM 620: *Feature Writing.* Three hours. Prerequisite, Journalism 501.

Practical instruction in gathering material for "human interest" and feature articles of various types and the writing of these types of manuscripts for magazines as well as newspapers. Consideration also is given to the marketing of manuscripts.

JOURNALISM 630: *Editorial Writing.* Three hours. Prerequisite, Journalism 501.

Course in the study of fundamentals and practice in editorial writing. A survey is made of editorial pages of several of the leading state and national newspapers.

JOURNALISM 640: *The Country Weekly.* Three hours. Prerequisite, Journalism 501.

Course designed to benefit agriculture and home economics students as well as journalism students. Consideration is given to the preparation of copy for weeklies as differentiated from the dailies.

JOURNALISM 650: *Practical Reporting.* Two hours. Open only to journalism majors or minors. Prerequisites, Journalism 501, 610, 620, 630 and 640.

Advanced course in newspaper practice, involving work on the college newspaper. Writing of articles for publication in the college newspaper upon assignment or consultation with the faculty supervisor of the paper.

JOURNALISM 651: *Practical Reporting.* Two hours. Prerequisite, Journalism 650.

Continuation of Journalism 650, with the same provisions and requirements applying.

JOURNALISM 653: *General Newspaper Work.* Two hours. Open only to Journalism majors. Prerequisite, Journalism 651.

Advanced course in copy editing, headline writing, proof reading and rewriting for the college newspaper.

JOURNALISM 654: *General Newspaper Work.* Two hours. Continuation of Journalism 653.

JOURNALISM 660: *Advertising.* Two hours. No prerequisite.

Fundamental study of advertising copywriting, appeals and layouts. Special emphasis is placed on retail advertising in newspapers.

Department of Mathematics

P. K. SMITH, PROFESSOR AND HEAD OF THE DEPARTMENT
PROFESSORS F. C. GENTRY, HENRY F. SCHROEDER, ERNEST M. SHIRLEY; ASSOCIATE PROFESSORS L. M. GARRISON, G. E. JONES; ASSISTANT PROFESSOR WALLACE HERBERT;* ACTING ASSISTANT PROFESSORS FANNIE SACHS, R. A. SUTTON; ACTING INSTRUCTORS HOLLIS HEARN, PAULINE JIMERSON, RUTH KENNEDY

The courses in the department are arranged to fit in with the general courses and also to give students majoring in mathematics a thorough preparation for teaching or graduate work.

For registration in Mathematics 401 the student must have had one and one-half units of high school algebra, or credit in Mathematics 405. For registration in Mathematics 402 the student must have had one and one-half units in high school algebra or Mathematics 405, or take Mathematics 405 concurrently. A further prerequisite for Mathematics 402 is one unit in plane geometry.

REQUIREMENTS FOR A MAJOR IN MATHEMATICS

Students majoring in mathematics are required to consult the Head of the Department of Mathematics during the second semester of their sophomore year in college for direction as to their major and minor courses of study during their junior and senior years.

Prescribed courses for a major: Mathematics 401, 402, 403, 460, 501, 502, 600, 601, 602, and in addition three semester hours earned in courses numerically above Mathematics 602.

REQUIREMENTS FOR A MINOR IN MATHEMATICS

(For students in other departments)

Students in other departments who wish to minor in mathematics are required to take Mathematics 401, 402, 501, 460, and in addition nine semester hours earned in courses numerically above Mathematics 501.

DESCRIPTION OF COURSES

MATHEMATICS 401: *College Algebra I.* Three hours. Prerequisite, one and one-half units of high school algebra or Mathematics 405.

Exponents, radicals, graph of a function, quadratics, systems of equations involving quardatics, variation, progressions, binomial theorem, and theory of equations.

*On leave of absence for advanced study.

MATHEMATICS 402: *Trigonometry.* Three hours. Prerequisite, one and one-half units in high school algebra or Mathematics 405 taken concurrently; one unit in plane geometry from high school.

Solution of right triangles, reduction formulas, functions of several angles and of multiple angles, logarithms, oblique triangles, trigonometric equations, and inverse functions.

MATHEMATICS 403: *Solid Geometry.* Three hours. Prerequisite, Mathematics 401 or 405 or 419, and plane geometry.

The plane, polyhedrons, cylinders, cones, and the sphere.

MATHEMATICS 405: *General Mathematics.* Three hours.

Basic principles of arithmetic reviewed, operations with polynomials, the formula, linear equations, exponents and radicals, and logarithms. This course is designed for students in the School of Arts and Sciences and for students in the School of Education offering only one year of mathematics for graduation.

MATHEMATICS 406: *General Mathematics* continued. Three hours. Prerequisite, Mathematics 405.

Quadratic equations, binomial theorem, progressions, theory of investment, and trigonometry of the right triangle.

MATHEMATICS 419: *Business Mathematics I.* Three hours. Prerequisite, one unit of high school algebra. This course is designed for students in the Commerce Department.

Polynomials, fractions, simple equations, simultaneous linear equations, percentage, simple interest, discount, and partial payments.

MATHEMATICS 420: *Business Mathematics II.* Three hours. Prerequisite, Mathematics 419.

Commuting obligations, equations of accounts, exponents and radicals, quadratic equations, logarithms, and compound interest.

MATHEMATICS 460: *College Algebra II.* Three hours. Prerequisite, Mathematics 401, 402.

Complex numbers, theory of equations, permutations and combinations, probablility, partial fractions, and determinants.

MATHEMATICS 501: *Plane Analytic Geometry.* Three hours. Prerequisite, Mathematics 401 (or Mathematics 405 and Mathematics 406, or Mathematics 419 and 420) and Mathematics 402.

Cartesian coordinates in the plane, straight line, circle, conic sections, polar co-ordinates, and transformations of axes.

MATHEMATICS 502: *Solid Analytic Geometry.* Three hours. Prerequisite, Mathematics 501.

Cartesian co-ordinates in space, the plane and the straight line in space, quadric surfaces, and transformation of co-ordinates.

MATHEMATICS 600: *Calculus I.* Three hours. Prerequisite, Mathematics 501.

Variables, functions and limits, differentiation of algebraic forms, various applications of the derivative, successive differentiation and applications, differentiation of transcendental functions and applications, differentials, and curvature.

MATHEMATICS 601: *Calculus II.* Three hours. Prerequisite, Mathematics 600.

Integration of elementary forms, the definite integral, calculation of areas, fundamental theorem of integral calculus and applications, integration by various devices, centroids, fluid pressure, and work.

MATHEMATICS 602: *Calculus III.* Three hours. Prerequisite, Mathematics 601.

Mean value theorem and applications, expansion of functions, partial differentiation and applications, multiple integrals, moments of inertia and volumes, and areas by multiple integrals.

MATHEMATICS 610: *Astronomy.* Three hours. Prerequisites, six hours of college mathematics, or sufficient maturity.

This is a course in descriptive astronomy with the mathematical processes largely eliminated.

The earth, moon, sun and planets, co-ordinate systems, motion in the solar system, the seasons, time, the stars, and the galactic system.

MATHEMATICS 619: *Business Mathematics III.* Three hours. Prerequisite, Mathematics 420.

Equation of payments, annuities, amortization and sinking funds, depreciation, bonds, life annuities, and insurance.

MATHEMATICS 627: *Statistics I.* Business Statistics. Four hours. Three lecture hours and two hours of laboratory. Prerequisites, Mathematics 419 and 420.

The laboratory period is devoted to the solving of problems and the use of computational machines.

Sampling tabulation, graphic representation, averages, dispersion and skewness, correlation, index numbers, seasonal fluctuations and cyclic application, characteristic curves, curve fitting, normal probability curve, and the probability error.

MATHEMATICS 628: *Statistics II.* Three hours. Prerequisites, Mathematics 627, or Mathematics 600.

The purpose of this course is to emphasize the mathematical phases of the subject to a greater extent than desirable in Mathematics 627. It is a course in mathematical statistics.

MATHEMATICS 656: *Materials and Methods in Teaching High School Mathematics.* Three hours. Mathematics 601 or sufficient teaching experience.

The aim in this course is to make a critical study in the presentation of high school mathematics; to study the most effective procedure in presenting topics in high school mathematics. The course is devoted chiefly to methods in arithmetic, algebra, and geometry.

MATHEMATICS 701: *College Geometry.* Three hours. Prerequisite, Mathematics 501, or sufficient teaching experience.

Geometric construction, geometry of the triangle, properties of circles and systems of circles.

MATHEMATICS 706: *Differential Equations.* Three hours. Prerequisite, Mathematics 602.

Definitions of ordinary and partial differential equations; of degree and order; of various types of solutions. Equations of the first order and first degree, equations of the first order and higher degree, singular solutions, applications from geometry and physics, linear equations with constant coefficients and with variable coefficients, exact equations, and integration in series.

MATHEMATICS 707: *Differential Equations.* Three hours. Prerequisite, Mathematics 706.

Total differential equations, systems of differential equations, partial differential equations of the first order, and partial differential equations of higher order.

MATHEMATICS 712: *Vector Analysis.* Three hours. Prerequisite, Mathematics 602, or registered in 602.

The algebra and analysis of vector quantities with applications to geometry, electricity, and mechanics.

Department of Music

LA VERNE E. IRVINE, PROFESSOR AND HEAD OF THE DEPARTMENT
ASSOCIATE PROFESSORS MARSHALL E. BRETZ, DORIS BURD HASKELL, JAMES A. SMITH; ASSISTANT PROFESSORS EDITH COTTON, LINNA TIMMERMAN HUNT, STELLA BOOLES KIDD, JACQUE L. NORMAN

GENERAL INFORMATION AND REGULATIONS

Professional attitude. No amount of technical skill, of theoretical knowledge, or of intellectual superiority on the part of the student can compensate for lack of positive professional attitude which manifests itself in attendance at clinics, conferences, seminars, concerts, department social functions, recitals by fellow students; in listening to certain superior radio programs; in cooperating in a constructive manner with the Director of Music and the Music Faculty in everything that tends to improve the department's service to the student, to the institution, the community, the state, and to the profession. Building a healthy, constructive professional attitude is an obligation of increasing importance.

Therefore, no student will be permitted to continue as a major in any music curriculum whose attitude has been unsatisfactory to the Director or the Music Faculty during the previous session.

To a certain degree the above statement applies to music minors and to those who take music courses as electives.

Considering the necessarily higher cost of training in music, an obligation rests upon the Faculty to limit the student personnel in the department to those who take fullest advantage of the opportunities offered.

Failure to attend senior recitals, concerts in Howard Auditorium, departmental meetings, conferences or afternoon recitals reveals a negative attitude which brings the right of the student to take music into question. Therefore, missing such events automatically reduces the student's grade in ensemble and applied music. The manner and extent of deductions will be posted on the bulletin board in the Music Department from time to time.

Ensemble credit and requirements. No student will receive more than two hours credit per semester for ensemble work; music majors only one hour credit per semester. Ensemble requirements and credits for music majors are a separate set-up, varying with individuals. No work is more important for prospective music teachers. Majors must have this work approved by the department head each semester. They must do ensemble every semester and summer session they are enrolled in a music course. All instrumental majors:

must do both band and orchestra work. Piano majors must enroll in choral ensembles. All non-majors taking applied music must enroll in appropriate ensemble work.

Students who take a twenty-four hour major in applied music are required to give a graduation recital. The term preceding this graduation recital a qualifying audition will be given the candidate for graduation by the entire faculty of the music department. In this audition the student may be asked to play scales, technical exercises, studies, or excerpts from the proposed recital. If, in the opinion of the faculty, the student has not achieved sufficient mastery in his chosen major to qualify as a graduate with a twenty-four hour major, he will be denied the privilege of giving his recital and will be given a failing grade.

After the student who plans to teach has elected the particular certification he wishes to obtain in pursuing a particular degree in music, he will be expected to complete the necessary courses to meet the certification desired before the degree is conferred. This provision is made in consideration of the complications involved in administering the various certifications in music; i.e., vocal, orchestra, and band.

Academic electives for professional majors in music are approved according to individual needs; e.g., voice majors are required to elect foreign language.

Because of the necessary variable in the music curricula the student must confer once each session with the Director of Music for the purpose of checking his own progress with his individual advisory sheet as maintained in the Music Department office in cooperation with the Registrar's office.

Pipe organ. A beautiful pipe organ has been installed in Howard Auditorium. This organ, the gift of Mr. and Mrs. G. A. Adams, makes it possible for interested and qualified Tech students, either majors or non-majors in music, to study pipe organ as a regular part of their college work.

USE OF EQUIPMENT

A large number of band and orchestra instruments are available for instructional purposes or for use in regular, faculty supervised Music Department organizations at a reasonable rental fee.

The pipe organ can be used only by those students who are studying or have studied pipe organ at this institution.

The use of the pianos in the practice rooms, class rooms, and auditorium of the Fine Arts building is restricted to those students who are studying music, either as majors or minors at this institution.

APPLIED MUSIC

Courses beginning with the numbers 4, 5, 6, or 7 ordinarily mean first, second, third, or fourth year courses respectively. Courses ending in 50 or 51 (for example, 450, 451) carry three hours of credit per semester. Usually in these courses the student receives two private half-hour lessons per week; in some cases, however, the student receives one private half-hour lesson per week and one class lesson per week of one hour duration. Courses ending in 52 or 53 carry two hours of credit per semester. A student may receive one private lesson per week of half-hour duration or he may be assigned to a class meeting two hours per week. Courses ending in 54 or 55 carry one hour of credit per semester. These courses usually require meeting class one hour per week.

In all applied music, the number of hours devoted to practice is the primary factor involved. The number of hours of practice per week depends upon whether the lessons are taken privately on in class and upon the amount of credit involved in the course. Failing to meet practice hours is a sufficient reason for failing courses in applied music. However, the number of semester hours of credit placed on the permanent record of the student in the Registrar's Office will depend entirely upon the number of hours actually devoted to practice. This stipulation is in accordance with the regulations of the National Association of Schools of Music. Students will be required to pay the regular music tuition fee for private lessons above the number normally required in their respective curricula if the additional lessons are required because of failure to meet practice hour assignments.

A student may have his credit reduced only once for failure to meet practice hour requirements in any one subject of applied music; failure to meet practice hours in the same subject in any subsequent semester will automatically cause the student to receive a failing grade unless the hours missed were because of illness or other satisfactory cause.

DESCRIPTION OF COURSES

I. THEORY AND METHODS

MUSIC 401: *School Music.* Two hours.

Materials and methods of teaching music in the elementary school. Rote songs, sight singing, study of rhythm, music fundamentals, and interpretation.

MUSIC 402: *School Music.* Two hours. Continuation of 401.

MUSIC 410: *Theory and Practice.* Three hours.

A study of notation, rhythm, major and minor scales and intervals. Sight-singing, ear training, rhythmic and melodic dictation. Prerequisite, a high school course in Fundamentals of Music or its equivalent.

MUSIC 411: *Theory and Practice.* Three hours. Continuation of 410, with some advanced content added.

MUSIC 501: *Harmony.* Three hours.

A study of triads and inversions, the dominant seventh chord and inversions. Harmonization of given melodies and basses and original themes. Keyboard harmony.

MUSIC 502: *Harmony.* Three hours.

A study of the dominant ninth, leading tone seventh, and diminished seventh chords and their inversions. Secondary seventh chords, and their inversions. Study of modulation, keyboard harmony.

MUSIC 503: *School Music.* Two hours.

Further acquaintance with most used songs of our common heritage. Continuation of the work to meet the twelve-hour standard for elementary classroom teachers.

MUSIC 504: *School Music.* Two hours. Continuation of 503.

MUSIC 510: *Theory and Practice.* Three hours. Continuation of Music 411.

MUSIC 511: *Theory and Practice.* Three hours. Continuation of Music 510.

MUSIC 520, 521: *Keyboard Harmony.* Two hours.

A special course in keyboard harmony supplementing the work of the harmony course; harmonizing of given melodies and basses at the piano.

MUSIC 560: *School Music.* Two or three hours, depending upon desires and needs of individual students.

A course designed particularly to meet the needs of the class-room teacher.

MUSIC 601: *Advanced Harmony.* Three hours.

A study of altered chords, enharmonic changes, irregular resolutions of the dominant seventh, modulation continued. Keyboard harmony.

MUSIC 602: *Advanced Harmony.* Three hours.

A study of non-harmonic tones, melodic figuration; accompaniments; the figured chorale and form, including simple song forms, the sonata, variation, rondo forms and the suite. Original exercises and keyboard harmony.

MUSIC 605: *School Music.* Two hours.

Organized observation of music teaching in training school and elsewhere. Study of the principles and problems of integration. Normally, this will be the fifth semester of the twelve-hour program for elementary teachers.

MUSIC 620, 621: *History and Appreciation of Music.* Three hours each semester.

A study of musical development with numerous recorded examples.

Attendance at assigned concerts and listening to particular radio programs are required.

MUSIC 630: *Music Appreciation.* Two hours. Two hours laboratory, one hour lecture per week. For non-Music majors. Attendance at assigned concerts and listening to particular radio programs are required.

A cultural course in appreciation of music. The object of this course is the attainment of appreciative listening through a general survey of outstanding musical compositions. Music 630 is open to all students except music majors. The sixth semester work for those students who wish to meet the 12-hour standard of the State Department of Education.

MUSIC 634: *History and Appreciation.* One hour.

This course will be offered every two years to accommodate transfer students who lack one hour in the requirement for the Tech degree and for state certification to teach.

MUSIC 635: *Music for Pleasure.* Two hours.

A course designed for physical education majors but open to others. Emphasizes singing for pleasure, instruction in proper use of the voice, playing of some simple instrument (e.g., the tonette), with technical knowledge of music introduced only incidentally or as necessity requires for the work pursued.

MUSIC 640, 641: *Form and Analysis.* Two hours.

A study of form from the simplest song forms through the sonata and symphony. Analysis of standard works with special emphasis on the sonata and rondo forms.

MUSIC 642: *Church Music.* Two hours.

An elementary course in procedures, materials, methods, and principles of organization to be used in church music. It is intended for those interested as church organists. as choir conductors or as general directors of church music.

MUSIC EDUCATION 660: *Music Methods.* Two hours.

A course emphasizing procedures, materials, and problems up to the high school level. It includes directed observation with discussions.

MUSIC 662: *Piano Pedagogy and Materials.* Two hours. Prerequisite, fifteen hours in piano.

This course is intended for those expecting to become private teachers of piano. It is required by the State Department of Education for those teachers wishing their pupils to be eligible for credit in piano in the local high schools.

MUSIC 674: *Drum Majoring.* One hour.

A study of fundamental technique of baton twirling with basic instruction in band formation, drill, and parade.

MUSIC 680: *Elementary Composition.* Two hours. Prerequisite, eighteen hours of theory.

This course affords an opportunity for the student to utilize his previous theoretical training in testing his creative ability in composition.

MUSIC 701: *Counterpoint.* Three hours.

Simple counterpoint; five species in two, three and four voices.

MUSIC 702: *Counterpoint.* Three hours. Continuation of Music 701. Not permitted as a theory elective unless the student has previously taken Music 520, Music 640, Music 680, and Music 701.

A study of combined species in three, four and more voices. Elementary work in Canon and Fugue.

MUSIC 712: *Orchestration.* Three hours.

A study of the individual characteristics, range, and capabilities of the instruments of the orchestra and band. Some arranging and scoring for varied groups. Some performance of arrangements under the students's conducting.

MUSIC 720: *Conducting.* Two hours.

Technique of the baton, score reading, principles of interpretation, and problems which face the conductor. The work will be adapted to the individual's needs with respect to vocal or instrumental emphasis. Practice in various campus organizations.

MUSIC 724, 725: *Conducting.* One hour each course.

Two hours a week in laboratory work in conducting for each course.

MUSIC EDUCATION 760: *Problems, Materials, and Administration.* Three hours.

A course which anticipates many of the practical problems which will confront the secondary teacher and supervisor of music; e.g. program building, contests, festivals, requisitions, markings. materials, scheduling, rehearsing, technical review of the instruments, etc.

MUSIC 762, 763: *Class Piano Methods and Practice Teaching.* Two hours for each course.

Study of methods in teaching piano pupils of different age levels. Practice in teaching pupils who do not wish college credit for their work.

MUSIC 774, 775: *Seminar.* One hour each semester.

Discussions and guided research based upon professional problems which confront the musician and the music teacher.

II. APPLIED MUSIC

A. PIANOFORTE

1. PIANO MAJORS

PIANO 450, 451: *Freshman Piano.* Six hours.

To enter the four-year degree course in piano, the student should be grounded in the correct touch and reliable technique. He should play all major and minor scales correctly in moderately rapid tempo; also broken chords in octave position in all keys. Op. 299 of Czerny and some of Heller's Op. 45, 46, 47. He should study Hanon's technic and at least twelve of Bach's two-part Inventions, memorizing Nos. 1, 8, and 14. The compositions for this year's work should correspond in difficulty to:

Haydn, Sonata No. 11, G. Major No. 20.
Mozart, Sonata C. Major No. 3, F Major No 13.
Beethoven, Sonata Op. 49, No. 1.
Beethoven, Sonata Op. 10, No. 1.
Schubert, Impromptu Op. 142, No. 2.

PIANO 550, 551: *Sophomore Piano.* Six hours.

During this year, the student should acquire a technique sufficient to play scales in sixths and tenths and dominant and diminished seventh arpeggi in rapid tempo. He should study selections from Czerny's Opus 740 and Cramer's 84 Studies. He should also study Bach's Three-Part Inventions Nos. 2, 3, 4, and 7. He should develop some octave technique and should study compositions of the following grades of difficulty:

Beethoven, Sonatas or Movements from Sonatas, such as Op. 2, No. 1; Op. 14, No. 1; Op. 13.

Mendelssohn, Songs Without Words, as "Hunting Song," "Spring Song."

Schubert, Impromptu B flat.

Chopin, Polonaise C sharp Minor, Valse E Minor, Nocturne Op. 9, No. 2.

Also compositions by Haydn and Mozart and some by standard modern composers of corresponding difficulty. At the end of this year, the student should demonstrate his ability to read at sight accompaniments and compositions of medium difficulty.

PIANO 650, 651: *Junior Piano.* Six hours.

Scales in double thirds and dominant and diminished seventh arpeggi in rapid tempo. Bach's three-part Inventions Nos. 8, 10, 14, 15 and several of Czerny's Op. 740. He should study Chopin Etudes, Bach Prelude and Fugue in C Minor; also selected studies from Clementi's Gradus Ad Parnassum. Compositions such as:

Beethoven, Sonatas Op. 31, No. 1, Op. 31, No. 2, Op. 27, No. 2.

Brahms, Rhapsodie B Minor-Sonata F minor.

Listzt — "Liebestraum"

Schumann—Nocturne F Major. Novelette F Major and compositions by modern American and foreign composers, such as, MacDowell, Dubussy, Grieg, Rubinstein and others.

PIANO 750, 751: *Senior Piano.* Six hours.

At the end of this year, the student must have acquired the principles of tone production and velocity and their application to scales, arpeggi, chords, octaves and double notes. He must have a repertoire including compositions by the principal classic, romantic and modern composers, such as Beethoven — Later sonatas Op. 53,57 and a concerto.

Liszt — Hungarian Rhapsodies Nos. 6 and 12.

Schumann — Sonata G Minor, a concerto.

Chopin — Polonaises, Scherzi, Barcarolle, Ballads, Etudes, Preludes.

Bach — Preludes and Fugues — Well-Tempered Clavichord.

Students must have had considerable experience in ensemble and should be capable sight readers; at end of the fourth year must give creditable graduation recital including a concerto or a movement from a concerto to be played from memory.

2. PIANO MINOR (FOUR YEARS)

PIANO 552, 553: Two hours per semester.

At the end of the second year, the student should have learned all major and minor scales and dominant seventh arpeggios. He should be able to play a number of studies in Czerny-Liebling, Book II, and some of Heller Op. 45 and 47. He should be able to play compositions such as Beethoven's "Minuet in G," MacDowell's "To a Wild Rose," Beethoven's "Contra Dance," sonatas by Mozart and Haydn.

PIANO 652, 653: Two hours per semester.

At the end of the third year he should be able to play Bach's Two-

Part Inventions Nos. 1, 8, 14 from memory and should have begun Czerny Op. 740. He should have studied compositions of such difficulty as Chopin's "Minute Waltz," "Valse in E Minor," and Mendelssohn's "Song Without Words."

PIANO 752, 753: Two hours per semester.

During the fourth year the student should acquire a technique sufficient to play scales in sixths and tenths and dominant and diminished seventh arpeggio in rapid tempo. He should study selections from Czerny Op. 740 and several of Bach's Three-Part Inventions. He should be able to play at sight simple accompaniments and hymn tunes.

For voice and instrumental majors and others desiring to obtain a minor in Piano.

Students not in the Music Department must also include Music 410, 411 with these courses.

B. VIOLIN

Entrance requirements to the violin course leading to the orchestra instructor's certificate.

The student should be able to play all major and minor scales in two octaves and the following scales in three octaves: G. A, and A-flat Majors, and G. and A minors. He should have studied five positions in finger technique. Suggested accomplishments in studies:

Sitt: Studies Op. 32, Book I and III.
Dont: Studies Op. 37.
Mazas: Special studies Op. 36, Book I.
Sevcik: School of Violin Technic Op. I.
Suggested accomplishment in solos:
Seitz: Concerto No. 1.
Leonard: Six Soles Op. 41.
Massenet: Elegy.
Bohm: Danse Hongroise.
Godard: Berceuse from "Jocelyn."

All students majoring in violin are required to play in the Tech Symphony Orchestra regardless of the nature of the degree sought.

It is expected that all students expecting to major in violin should have had at least one year of previous study. A student should be able to play major and minor scales in two octaves, studies and pieces using the first three positions.

Those who are deficient in entrance requirements may register for violin without credit and secure the necessary entrance level, the amount of non-credit study depending upon the progress made.

VIOLIN 450: *Freshman Violin.* Three hours.

Scales. Selected studies from Mazas Op. 36, Book I; Violin Technics by Sevcik: Selections from the Kreutzer Studies. Solos by Leonard, De Beriot, Sitt, Bohm. One sonata by Corelli Op. 5, Volume II. One concerto by Seitz, Viotti or De Beriot.

VIOLIN 451: *Freshman Violin.* Three hours.

Scales in three octaves. Completion of the Mazas Studies, Op. 36, Book I. Selections from the Kreutzer Studies.Solos by Godard, Drdla, Saint-Saens, Borowski. One sonata by Corelli. One concerto by Viotti, Kreutzer or De Beriot.

VIOLIN 550: *Sophomore Violin.* Three hours.

Selections from the Kreutzer Studies and the Sitt Studies Op. 80, Book I. Solos by Bach, Beethoven, Ries, Wieniawski, Kreisler. One sonata by Corelli, Nardini, or Handel. One concerto by Bach, Kreutzer. or De Beriot.

VIOLIN 551: *Sophomore Violin.* Three hours.

Selected studies by Kreutzer and Sitt. Solos by Bach, Brahms, De Beriot, Kreisler and others. One concerto by Bach, Mozart, or Rode.

VIOLIN 650: *Junior Violin.* Three hours.

Completion of the Kreutzer Studies. Selections from Fiorillo Caprices. Solos by classic and modern composers. Selections from the Bach Sonatas for violin alone. One concerto by Bach, Mozart or Godard.

VIOLIN 651: *Junior Violin.* Three hours.

Selections from the Fiorillo Caprices. Selections from the Bach So natas for violin alone. Solos selected. One concerto by Mozart, Wieniawski, or the Mendelssohn in E minor.

VIOLIN 750: *Senior Violin.* Three hours.

Completion of the Fiorillo Caprices. Selections from the Rode Studies. Selections from the Bach Sonatas. One concerto: Mendelssohn, Wieniawski or Bruch. Selected solos by Vieuxtemps, Wieniawski, Sarasate, Kreisler and others.

VIOLIN 751: *Senior Violin.* Three hours.

The work of this semester will be spent in building up a repertoire in preparation for the graduating recital. Selections must include a sonata by Bach, Handel, or Beethoven, and a concerto by Bach. Mendelssohn, Mozart, Bruch, Lalo, or Wieniawski.

VIOLIN 452, 453, 454, and 455: *Minor in Violin.*

Studies and selections according to the needs and degree of advancement of the individual student.

C. VOICE

1. MAJORS

It is recommended that voice majors show some knowledge of piano before entering voice work.

VOICE 450: *Freshman Voice.* Three hours.

Elementary instruction in breathing, tone placing, vowel formation. Tests; Concone (Fifty Lessons in Voice) begun.

VOICE 451: *Freshman Voice.* Three hours.

Continuation of Voice 450.

VOICE 550: *Sophomore Voice.* Three hours.

Exercises for agility and for sustaining tone. Major and minor scales and arpeggio.

VOICE 551: *Sophomore Voice.* Three hours.

Study of classic vocal embellishments, the recitative. The voice student must be able to sing at least one of the less exacting arias from opera and oratorio as well as several standard songs from memory.

VOICE 650: *Junior Voice.* Three hours.

Study of selections from the Anthology of Italian Songs, Volumes I and II, as well as some English, French and German songs and arias.

VOICE 651: *Junior Voice.* Three hours.

Continuation of Voice 650.

VOICE 750: *Senior Voice.* Three hours.

Continuation of Voice 651,

VOICE 751: *Senior Voice.* Three hours.

Intensive study of opera, oratorio and the best English, French, Italian and German song literature. The student must have a repertoire of at least four operatic arias, four oratorio arias, twenty classic and twenty standard modern songs. A graduation recital must be prepared and presented satisfactorily before credit may be received in this course.

2. NON-MAJORS

VOICE 452, 453: *(For non-voice majors).* Two hours.

One private and one class lesson per week. Instruction in posture, breathing, tone placement and vowel formation.

VOICE 454, 455: *(For non-voice majors).* One hour.

VOICE 552, 553: *(Sophomore voice for non-voice majors).* Two hours credit.

Technical studies continued, supplemented by the study of simple songs.

VOICE 554, 555: *(Sophomore voice for non-voice majors).* One hour.

Technical studies continued, supplemented by the study of simple songs.

VOICE 652, 653: *(Junior voice for non-voice majors).* Two hours credit.

Advanced technical study, supplemented by the study of songs of medium difficulty.

VOICE 654, 655: *(Junior voice for non-voice majors).* one hour.

Advanced technical study accompanied by songs of medium difficulty.

VOICE 752, 753: *(Senior voice for non-voice majors).* Two hours.

Technical studies continued, supplemented by study of a varied repertoire of songs.

VOICE 754, 755: *(Senior voice for non-voice majors).* One hour.

Vocal technique continued, supplemented by the study of a varied song repertoire.

D. BRASS, WOODWIND, AND PERCUSSION

FIRST YEAR

MUSIC 450: Trumpet, Baritone, Trombone, Clarinet, Horn, Tuba, Percussion, or Saxophone. Three hours.

MUSIC 451: A continuation of Music 450. Three hours.

SECOND YEAR

MUSIC 550: A Continuation of Music 451. Three hours.

MUSIC 551: A Continuation of Music 550. Three hours.

THIRD YEAR

MUSIC 650: A continuation of Music 551, studying only the Trumpet, Trombone, Baritone, or Clarinet.

MUSIC 651: A Continuation of Music 650. Three hours.

FOURTH YEAR

MUSIC 750: A Continuation of Music 651. Three hour.

MUSIC 751: A Continuation of Music 750. Three hours.

E. PIPE ORGAN

A limited number of interested students having the prerequisite pianistic ability may now study organ as a regular part of their college work regardless of whether or not they are music majors.

Entrance requirements to the organ course leading to a certificate of organ playing are the following:

The student should be able to play all major and minor scales on the piano. He should have a thorough understanding of the principles of piano technique, a thorough facility in sight-reading and an adequate knowledge of harmony. The student should be able to play some of the following representative works on the piano: Chopin Etudes, Sonatas by Mozart, Haydn or Beethoven, any of the Preludes and Fugues from Bach's "Well-Tempered Clavichord, and Intermezzo or Phapsody by Brahms.

ORGAN 452: *Freshman Organ.* Two hours.

Manual and pedal technique from one or more of the following texts: "The Art of Organ Playing," Dickinson; "The Art of Organ Playing," W. T. Best; "Method of Organ Playing," Gleason. Assorted chorale preludes by Bach and Brahms; slow movements from any of the six sonatas by Mendelssohn; Short preludes and fugues, "Little Fugue in G minor" and "Jesu, Joy of Man's Desiring," Bach.

ORGAN 453: *Freshman Organ.* Two hours.

Continuation of Organ 452.

ORGAN 552: *Sophomore Organ.* Two hours.

Continuation of Pedal Exercises and Studies for Manuals and Pedal.

Selection of works from Bonnet Historical Recital Series, Vols. I and II; Gabrieli, Buxtehude, Pachelbel, Couperin and others; Franck's "Pastorale," Bach's "Ich ruf' zu dir, Jesu Christ" and "In dir ist Freude;" shorter pieces for church and recital by modern American and European composers.

ORGAN 553: *Sophomore Organ.* Two hours.

Continuation of Organ 552.

ORGAN 652: *Junior Organ.* Two hours.

A thorough preparation for church service playing, with special emphasis on hymn playing, improvisation, accompanying and conducting anthems from the organ console. French's "Prelude, Fugue and Variation," "Cantabile" and "Piece Heroique," one complete sonata from the six Mendelssohn sonatas, assorted movements from the Ten Symphonies of Widor; shorter works for recital programs by Bonnet, Handel, Jongen, James, Dickinson, Delamarter, Sowerby, and others.

ORGAN 653: *Junior Organ.* Two hours.

Continuation of Organ 652.

ORGAN 752: *Senior Organ.* Two hours.

Trio Sonta I or VI, Bach; Choral in A minor, Franck; Choral in E major, Franck; Toccata and Fugue in D minor, Toccata in F major, Prelude and Fugue in E flat major (St. Ann's) all by Bach; selected movements from the six symphonies of Vierne; shorter works for recital programs by Bingham, Dallier, Edmundson, Karg-Elert, Maleingreau, Vaughan-Williams, Weitz, and others. An acquaintance with a wide organ repertoire will be stressed with classes for advanced students in playing, repertoire, and criticism of concert decorum.

ORGAN 753: *Senior Organ.* Two hours.

Continuation of Organ 752.

F. HARP

A limited number of students, either non-majors or majors in music, may study harp. Prerequisite, a satisfactory degree of proficiency in piano.

G. ENSEMBLES

BAND-O'-GLEE

This is a choral organization of women students of the three upper classes. It affords an excellent opportunity for the enjoyment of group singing of some of the best literature for women's voices. Public appearances of this group are popular events. Admission by tryout; two one-hour rehearsals a week. One hour credit per semester.

FRESHMAN GIRLS' GLEE CLUB

Limited to freshman girls, this group varies considerably in size and quality from year to year. It is always a very valuable club and attracts many of the most capable girls of the freshman class. Admission by tryout; two one-hour rehearsals per week. One hour credit per semester.

MEN'S GLEE CLUB

This club is open to any Tech men who like to sing. The music is restricted to numbers which are favorites with college male glee clubs the country over. Two one-hour rehearsals a week. One hour credit per semester.

Instruction in posture, breathing, tone placement, and vowel formation.

TECH BAND

Membership is open to any student who can qualify upon application to and consultation with the director. Registration for band is held from 8 a.m. to 3 p.m. during the first day of registration. Special drills and tryouts will be held daily from 3 to 5 p.m. during registration week. The football trips the first semester and the concerts the second semester make the work both enjoyable and profitable. One hour credit per semester.

TECH CHOIR

This organization devotes most of its efforts to some of the major choral compositions for mixed voices. A considerable amount of its work is A Capella. Membership, which is by invitation only, is a matter of justifiable pride.

TECH SYMPHONY ORCHESTRA

Symphonic music is rapidly increasing in popularity. Most of the great masters did some of their best composing for symphony orchestra, and the most satisfying way of knowing this literature is by playing it.

Since strings are the foundation of a symphony, all who play stringed instruments are urged to join this organization. Two one-hour rehearsals weekly. One hour credit per semester.

LOUISIANA TECH COLLEGIANS

The Tech Collegians is a service organization which furnishes music for dances, banquets, receptions, and other social functions on and off the campus. Some members participate only in what is called the Concert Collegians, whereas others do both concert work and dance work. Those who play dance work in the Collegians find it possible to defray their college expenses in this manner.

Department of Physics

PATRICK D. NEILSON, PROFESSOR AND HEAD OF THE DEPARTMENT
PROFESSOR H. E. RUFF; ASSISTANT PROFESSOR ARTHUR G. BAILEY; ACTING ASSISTANT PROFESSOR ROBERT ELIOFF

REQUIRMENTS FOR A MAJOR IN PHYSICS

Each student who majors in Physics is required to follow the Physics curriculum. At the end of each year he must, with the approval of the Head of the Department, choose his program of work for the succeeding year. A minimum of thirty semester hours is required for a major in Physics, including Physics 501, Physics 502, and twenty-two semester hours in advanced courses. Each student who majors in Physics is required to choose minors in Mathematics and Chemistry.

REQUIREMENTS FOR A MINOR IN PHYSICS

(For students in other departments)

Students from other departments who elect a minor in Physics should complete Physics 501, Physics 502, and in addition twelve semester hours in advanced courses.

DESCRIPTION OF COURSES

PHYSICS 501: *General Physics.* Four hours. Prerequisites, Mathematics 401 and 402.

For engineers, pre-medical students, and all others with special interest in the subject. Subjects: Mechanics, Heat, and Sound. Three hours of lecture and one three-hour laboratory period each week.

PHYSICS 502: *General Physics.* Four hours. Prerequisites, Mathematics 401 and 402, Physics 501.

A continuation of Physics 501. Subjects: Electricity, Magnetism, and Light. Three hours of lecture and one three-hour laboratory period each week.

PHYSICS 503: *Practical Physics for Agriculture.* Three hours. Prerequisite, Mathematics 407 and 408.

Subjects: Mechanical energy, Heat energy, and Electrical energy. Three hours of lecture and demonstration each week.

PHYSICS 504: *A Survey Course in Physics.* Three hours.

For students of Music, Speech, Art, and for all non-science students who wish to devote only three hours to the subject. Three hours of lecture and demonstration each week.

PHYSICS 505: *Classical and Modern Physics.* Three hours.

A descriptive course for all students interested only in the cultural aspect of the subject. Special emphasis is placed on the part modern

physics has played in development of present day civilization. Three hours lecture and demonstration each week.

PHYSICS 506: *Classical and Modern Physics.* Three hours.

A continuation of Physics 505. Three hours of lecture and demonstration each week.

PHYSICS 507: *Household Physics.* Three hours. Prerequisite, Mathematics 405 or its equivalent.

For students majoring in Home Economics. A course in applied physics in which the applications have been chosen from the daily household life and from the various commercial fields which Home Economics students enter. The laboratory work affords the student an opportunity to learn something of laboratory technique, and to study at first hand the operation of household equipment. Three hours of lecture, demonstration and laboratory each week.

PHYSICS 508: *Household Physics.* Three hours. Prerequisite, Physics 507.

A continuation of Physics 507. Three hours of lecture, demonstration and laboratory each week.

PHYSICS 612: *Radio.* Four hours. Prerequisite, Physics 502 or Engineering 401.

This course is offered to those students whose interest in the subject makes them wish to gain a thorough knowledge of, and familiarity with, the fundamental principles underlying radio. Three hours of lecture and one three-hour laboratory period each week.

PHYSICS 614: *Radio.* Four hours. Prerequisite, Physics 612.

A continuation of Physics 612. Three hours of lecture and one three-hour laboratory period each week.

PHYSICS 630: *Modern Physics.* Four hours. Prerequisites, Physics 502 and Mathematics 601.

A second course in college physics designed to give the student a comprehensive knowledge of the modern developments of the subject. The course deals with a wide variety of topics including the photoelectric effect, quantum theory, television, nuclear physics, cosmic rays, geophysics, and relativity. Three hours of lecture and one three-hour laboratory period each week.

PHYSICS 631: *Modern Physics.* Four hours. Prerequisite, Physics 630.

A continuation of Physics 630. Three hours of lecture and one three-hour laboratory period each week.

PHYSICS 610: *Meteorology.* Three hours. Prerequisite, Physics 631.

A study of dynamic meteorology, synoptic meteorology, long-range forecasting, climatology, and other related work. Three hours of lecture each week.

PHYSICS 611: *Meteorology.* Three hours. Prerequisite, Physics 610.

A continuation of Physics 610. Three hours of lecture each week.

PHYSICS 720: *Geophysics.* Three hours. Prerequisite, Physics 631.

Fundamental theory of the equipment and field techniques of the recognized exploratory geophysical methods, with emphasis on the magnetic, electrical, gravitational, and seismic. Three hours of lecture each week.

PHYSICS 721: *Geophysics.* Three hours. Prerequisite, Physics 720.

A continuation of Physics 720. Three hours of lecture each week.

PHYSICS 730: *Atomic Physics.* Three hours. Prerequisite, Physics 631.

A survey of the developments in contemporary theories of atoms, molecules, matter, and radiation. Three hours of lecture each week.

PHYSICS 731: *Applied Nuclear Physics.* Three hours. Prerequisites, Physics 631 and 730.

A discussion of natural radio-activity and its laws and the methods used for the detection of nuclear particles. The greater part of the course is devoted to a discussion of the technique used in artificial radio-activity and the description of the devices used for this purpose. Nuclear fission and the manner in which atomic energy can be released and utilized are discussed. Three hours of lecture each week.

Department of Social Sciences

GARNIE W. McGINTY, PROFESSOR AND HEAD OF THE DEPARTMENT
HISTORY: PROFESSORS GARNIE W. McGINTY, JOHN E. McGEE, J. O. VAN HOOK; ASSISTANT PROFESSOR ROBERT W. MONDY.
POLITICAL SCIENCE: ASSOCIATE PROFESSOR LORIMER E. STOREY; ASSISTANT PROFESSOR OREN TROUT.
SOCIOLOGY: PROFESSOR LAWRENCE J. FOX.

REQUIREMENTS FOR A MAJOR IN SOCIAL SCIENCE

Students intending to major in Social Science are required to consult the Head of the Department of Social Sciences during the second semester of their sophomore year in college (and from time to time later, as may be necessary), for direction as to their major and minor courses of study during their junior and senior years.

RECOMMENDATIONS AND SUGGESTIONS

Students expecting to do graduate work should choose French as their foreign language. Students who expect to enter business will probably choose Spanish.

RECOMMENDATIONS FOR A MINOR IN THE DEPARTMENT OF SOCIAL SCIENCE

(FOR STUDENTS IN OTHER DEPARTMENTS)

HISTORY: History 401, 402, and 501, 502, plus nine hours of advanced history taken during the junior and senior years constitute a minor in history.

POLITICAL SCIENCE: Nine hours in addition to History 401, 402, 501, 502 chosen from the following constitute a minor: Political Science 501, 502, 603, 610, 612, 614, 618, and 620.

SOCIOLOGY: Nine hours in addition to History 401, 402, 501, 502 chosen from the followng constitute a minor: Sociology 501, 502, 608, 610, 612, 614, 616, 618, and 620.

DESCRIPTION OF COURSES

HISTORY

HISTORY 401: *History of the Western World to 1500.* Three hours.

After a glance at the life of pre-civilized man, an introductory study is made of the rise of Western civilization in the Ancient Near East and of its development in the Mediterranean region and in Medieval Europe.

HISTORY 402: *History of the Western World Since 1500.* Three hours.

An attempt is made to trace the rise of mechanized industry, the growth of contemporary nationalism, the development and significance of modern imperialism, the extension of popular government, the progress of social reform, the birth of present-day thought and culture, and the emergence of existing international problems.

HISTORY 501: *History of the United States, 1492-1865.* Three hours.

A general survey course which emphasizes the social and political life of the later colonial period, the rise of the independence movement, the separation from England, the Confederation period, the establishment of the Federal government, the growth of democracy and the slavery question to 1865.

HISTORY 502: *History of the United States, 1865 to the Present.* Three hours.

A study of the new nation that has emerged since the War Between the States. Emphasis is placed on reconstruction, the new industry, the settlement of the West, the growth of empire, the position of the United States in the world today with social and political problems involved.

HISTORY 607: *Economic History of the United States.* Three hours.

A study of the economic forces and institutions in American life from colonial times to the present. Account is taken of the growth of population, territorial expansion, agriculture, labor, commerce, manufactures, tariff, finance, transportation, and communication.

HISTORY 609: *Economic Europe in the Machine Age.* Three hours.

The central theme of this course is the impact of the machine upon European economic life in the nineteenth and twentieth centuries.

HISTORY 620: *History of Europe from 1870 to 1914.* Three hours. Prerequisite, History 402 or the equivalent.

A study of political, economic, and social developments, with emphasis on political reform movements, the quest for social security, cultural trends, dynamic nationalism, and imperialistic rivalries.

HISTORY 621: *Europe Since 1914.* Three hours. Prerequisite, History or the equivalent.

This course embraces a study of the causes and consequences of World War I, problems arising from the peace treaties, quests for peace and economic security, resurging economic rivalries and power politics (the "haves" versus the "have-nots"), conflicting ideologies (democracy versus totalitarianism), the failure of appeasement, and World War II.

HISTORY 630: *The Intellectual and Cultural History of the Western World from the Earliest Times to the End of the Middle Ages.* Three hours.

A survey is undertaken of the broad lines of development in the philosophical, religious, and scientific thought and in the literary and artistic achievement of primitive man, the peoples of the ancient Orient, the Greeks, the Romans, and the Europeans of the Earlier and Later Middle Ages. An endeavor is made to relate the various lines of development to each other and to society as a whole.

HISTORY 631: *The Intellectual and Cultural History of the Western World in Modern Times.* Three hours.

The course surveys the major trends in the science, philosophy, religious thought, social science, literature, and art of modern Westerners. The interdependence of the various trends is disclosed as well as their common relationship to the state of society.

HISTORY 640: *Hispanic American History.* Three hours.

This course is designed to foster an ever-growing interest in, and a better understanding of, the Hispanic American peoples. It is a survey of their political and socio-economic development from the colonial period to the present time, culminating in the study of current inter-American relations.

HISTORY 650: *The History of the American Frontier.* Three hours.

This course is an intensive study of life on the American frontier. It traces the movement of the frontier from the settlement of Jamestown to its disappearance in 1890. Emphasis is placed on the social and economic conditions and the frontier's influence on the older sections of the United States.

HISTORY 680: *The English-Speaking Peoples of Yesterday.* Three hours.

This course describes the entrance of the English-speaking peoples upon the historical stage and discusses their role down to the end of the eighteenth century.

HISTORY 681: *The English-Speaking Peoples of Today.* Three hours.

This course surveys the historical role of the English-speaking peoples in the nineteenth and twentieth centuries.

HISTORY 700: *Diplomatic History of the United States to 1898.* Three hours.

Beginning with the colonial foundations of American diplomacy, this course surveys theforeign relations of the United States from the establishment of independence to emergence as a world power. It includes such topics as the machinery of diplomacy, the efforts of the young republic to maintain its sovereign status and its rights as a neutral, the Monroe Doctrine, territorial expansion, and the diplomatic problems pertaining to slavery and secession.

HISTORY 701: *American Diplomacy since 1898.* Three hours.

This course emphasizes the development of the Isthmian-Caribbean policy of the United States, the trend of Far Eastern relations centering about the "Open Door," the World War and subsequent European relations of the United States, and the development of the "Good Neighbor" policy and the solidarity of American states.

HISTORY 705: *Recent History of the Far East and the Pacific Area.* Three hours.

A study of geographical factors, the political organization and social institutions of China and Japan at the time of the foreign impact, foreign aggression and international rivalries in China, the establishment and maintenance of the "Open Door," the rise of modern Japan, the "New Order" in eastern Asia, and the war in the Pacific Area.

HISTORY 750: *History of the South.* Three hours.

A study of the growth and development of the South. Such factors as soil, climate, natural resources, and population will be noted and the influence they have had in molding the peculiar way of life found in the South.

HISTORY 760: *History of Louisiana.* Three hours.

A study of French and Spanish explorations. establishment and growth of the French colony, the Spanish period, the Louisiana Purchase and the American period; a study of local conditions and federal relations.

HISTORY 765: *Recent American History.* Three hours.

This course is an intensive study of twentieth century development. It emphasizes the New Imperialism from 1898 and traces the development through the New Deal and World War II to the present.

POLITICAL SCIENCE

POLITICAL SCIENCE 501: *Government of the United States.* Three hours.

A survey of the historical development and organization of the national, state, and local governments; governmental problems connected with the federal system; national and state constitutions; civil and politiacl rights; the party system; nature, structure, powers, and procedure of the legislative, executive, and judicial departments in state and nation.

POLITICAL SCIENCE 502: *Comparative European Governments.* Three hours.

A comparative consideration of the governmental structure and political institutions of Great Britain, France, and other liberal democratic states with those of Fascist and Communist states of Germany, Italy, Soviet Russia, and Japan. The forces underlying recent trends in governmental theory, organization, and functions will be analyzed.

POLITICAL SCIENCE 603: *State and Local Government in the United States.* Three hours.

National-state relations; development of principles and forms of state government; state constitutions; constitutional conventions; judicial administration; the legislature; principles of public administration: the governor, administrative organization and reorganization; financial control; personnel administration; legislative and judicial control of administration; the problem of rural local government; organization, functions, and relationships of county and parish government; state-local relations; criticism and movement for reform. Special reference to Louisiana.

POLITICAL SCIENCE 610: *Governmental Regulation of Business.* Three hours.

Legislative policies and constitutional problems together with administrative regulations and governmental operation relation of government to liberty; property, welfare; development of American policy toward business and labor; judicial attitudes toward legislation under the commerce clause, the taxing power, the police power, and the "due process" clause of the Constitution; problems in policy and constitutional interpretation; methods and scope of administrative regulation; problems in administrative regulation; comparison between regulation and governmental operation; problems in governmental operation; and governmental promotion and ownership of business.

POLITICAL SCIENCE 612: *Public Administration.* Three hours.

Administrative problems and organization; financial administration; national-state and national-municipl cooperation; practices in organization for personnel administration: recruitment, classification, training, tenure, promotion, removal, political neutrality, and retirement; organization of public employees; development of administrative law; powers and procedure of administrative agencies; law of public liability; rights of public servants.

POLITICAL SCIENCE 614: *American Municipal Government and Administration.* Three hours.

The formation and development of governmental theory, structure, and functions in American municipalities; movement toward urbanization; position of the city; powers; liability; charter; electorate and party system; types of organization; program of reform; nature of administration; personnel management; revenues and expenditures; purchasing; planning and zoning; public services; state and local problems. Special reference to Louisiana cities.

POLITICAL SCIENCE 618: *American Political Parties.* Three hours.

Political parties as an essential factor in democratic government; the nature of politics; the contenders for power: sectionalism, agrarianism, labor and the state, business and politics, the role and technique of pressure groups and the lobby; the nature and functions of political parties; party organization; the party machine as an interest group; the rise of minor parties; the nominating process; national conventions; party finance; the party and the government; the electorate; campaign techniques; electoral behavior; straw polls; the role of force; pecuniary sanctions; education and politics; and the expression of public opinion.

POLITICAL SCIENCE 620: *Legislation in the United States: Federal and State.* Three hours.

Legislation as a process and a product; the origin and development of representative government; the functions of legislatures; the structure of legislatures; minority and proportional representation; functional representation; pressure groups and lobby; legislative sessions and membership; organization, leadership, and procedure of American legislatures; the committee and party control; expert aid in legislatures; some technical problems of law-making; judicial, administrative, and popular law-making.

POLITICAL SCIENCE 625: *American Political Theory.* Three hours.

The ideas of American political writers and leaders from colonial times to the present, with emphasis upon the ideas of the American Revolution, the framers of the Constitution, the Hamiltonian, Jeffersonian, and Rooseveltian schools of political thought, and the slavery controversy, together with a brief resume of the leading European political philosophers and their influence upon American political thought.

SOCIOLOGY

SOCIOLOGY 501: *Principles and Elements of Sociology.* Three hours. Not open to freshmen.

This course is designed to aid students in observing social phenomena

and in recording their observations; also, to guide them in reading and interpreting the literature of the subject.

SOCIOLOGY 502: *Social Problems.* Three hours. Prerequisite, Sociology 501.

In this course a study is made of the defective, dependent, and delinquent classes of society; of the conditions and factors contributing to the production and existence of these classes; and of the best methods of treating and caring for them.

SOCIOLOGY 505: *Sociology for the Home Maker.* Three hours.

This course is intended primarily for Home Economics students. A study will be made of the fundamental principles of society, and the relationship of these to the home. Emphasis will be placed on the organization of family life and its bearing on the community, state, and nation.

SOCIOLOGY 600: *An Introduction to Social Welfare Work.* Three hours.

The course is designed to acquaint the student with the field of social work relative to its history, general function, and status in present day society.

SOCIOLOGY 604: *Social Psychology.* Three hours. Prerequisites, Psychology 402, or Psychology 502, Sociology 501. (Same as Psychology 604)

A study of the nature of social behavior, social stimulation and response; a psychological analysis of society and social institutions.

SOCIOLOGY 608: *The Family.* Three hours. Prerequisites, Sociology 501, 502.

A study is made of the various forms of family life that have been erected upon the biological foundation. Modern phases of the problem of the adaptation of the family to the varied conditions of urban and rural environments.

SOCIOLOGY 610: *Rural-Urban Sociology.* Three hours. Prerequisites, Sociology 501, 502.

This is a study of the genetic and historical development of rural and urban groups of isolation, contact, and accommodation in these environments. Attention is given to the influence of economic, religious, physical, and cultural factors upon the traditions and attitudes of the members of these groups.

SOCIOLOGY 612: *Racial Minority Groups.* Three hours. Prerequisites, Sociology 501, 502.

A study of the ethnological, physiological, and cultural differences; of the concepts, isolation, assimilation, amalgamation, nationality, race pride and race prejudice.

SOCIOLOGY 614: *Criminology.* Three hours. Prerequisite, Sociology 501.

An analysis of the nature and causative factors leading to crime, a history of its treatment, and a comparative study of present methods of dealing with the criminal.

SOCIOLOGY 616: *Anthropology.* Three hours. Prerequisite, Sociology 501.

This course begins with the examination of the remains of ancient man, showing the developmental process by a study of the various cultural epochs through which he has passed. It also makes an examination of the racial and ethnic groups now on earth and looks into the cultural processes of diffusion and parallelism. In all, it attempts some appraisal of the cultural factor in the developmental process of human kind.

SOCIOLOGY 618: *Social Control.* Three hours. Prerequisite, Sociology 501. Sociology 604 is recommended but not required prior to taking this course.

An examination of the stabilizing influence of institutions and a study of the agencies striving to secure uniformity in the behavioral pattern. Emphasis is placed on the techniques by which group leaderships seek to bring about sufficiently uniform response in members so as to make the groups functionally effective.

SOCIOLOGY 620: *Special Problems in Sociology.* Three hours.

Under special circumstances, this course may be repeated for additional credit by extending or intensifying the original problems of study. Prerequisites: Sociology 501, and approval of the instructor and the head of the department.

This course is intended for the advanced student who is embarking on graduate or special study requiring a somewhat specific type of preparation. In no case will it be considered for a student until he has demonstrated reasonable competence in the social science field. Problems for study will be arranged in conferences with the instructor.

Department of Zoology

J. R. FOWLER, PROFESSOR AND HEAD OF THE DEPARTMENT
ASSOCIATE PROFESSORS F. L. AFEMAN, S. M. WEATHERSBY
ASSISTANT PROFESSOR R. M. PULLIG

REQUIREMENTS FOR A MAJOR IN ZOOLOGY

Students intending to major in Zoology are required to follow the zoology curriculum. During the second semester of their sophomore year (and later as may be necessary) they are required to consult the Head of the Department for directions as to their major and minor courses of study during their junior and senior years.

Major: A minimum of thirty semester hours (18 of which must be advanced courses) is required for a major in Zoology. Courses which have been taken during the freshman and sophomore years will count in fulfillment of this requirement. Zoology 401 and 402 are required and enough additional courses are to be chosen from the following list to complete the requirements: Zoology 501-502, 511, 512, 515, 610, 611, 620, 625, 630: The following technique courses may apply on a major: 642, 643, 644. Students preparing to teach science in high schools should elect enough physics to total twelve hours.

Minor: Students majoring in Zoology are also required to choose a minor (of at least twelve hours of advanced courses) in a related field and schedule the courses necessary to satisfy the requirements of the department in which the minor is chosen.

REQUIREMENTS FOR A MINOR IN ZOOLOGY

(For students in other departments)

Students electing Zoology as a minor are required to follow the same requirements as for the major; except a minimum of twenty-one hours is required instead of thirty.

Those students who desire to qualify for positions as laboratory technicians may do so by following the curriculum for medical laboratory technicians.

DESCRIPTION OF COURSES

ZOOLOGY 400: *Introductory Zoology.* (Formerly Biology 401). Four hours. Three hours lecture and three hours laboratory per week.

A brief survey of animal biology.

ZOOLOGY 401, 402: *General Zoology.* A two semester

course. Four hours each semester. Three hours lecture and three hours laboratory per week.

These courses are designed to give an extensive survey of the facts and principles of animal biology. Required of majors and minors in the department and open to other students who desire such a course.

ZOOLOGY 501: *Invertebrate Zoology.* Four hours. Prerequisite, Zoology 401, 402, or 400.

The student is introduced into a somewhat extensive study of representative types of invertebrates, their structures, ecology, life histories, and economic importance. Two hours lecture and two three-hour laboratory periods per week.

Zoology 502: *Vetebrate Zoology.* Four hours. Prerequisite, Zoology 401, 402, or 400.

This course is designed to acquaint the student with the representative forms of the vertebrates, their comparative structure, life histories, ecology, and evolution. Two hours lecture and two three-hour laboratory periods per week.

ZOOLOGY 511: *General and Economic Entomology.* (Replaces Biology 510 and 511) Three hours.

General consideration is given the Phylum Arthropoda in relationship to other animal groups. Special emphasis is placed upon the Class Insecta; including insect structure, principles of classification, special study of insect pests of farm, home and orchard, etc., their life cycles and controls. Two hours lecture and three hours laboratory per week.

ZOOLOGY 512: *Forest Entomology.* Three hours.

A general study of insect structure, classification, etc., leading into a special study of those insects of economic significance to the forester. Field-trip collections will be identified, preserved and studied as to importance, life cycle, and control. Two hours lecture and three hours laboratory per week.

ZOOLOGY 515: *Medical Entomology.* Three hours. Prerequisite, one semester of beginning zoology recommended.

A consideration of insects and other Arthropods that are pests directly and of importance as carriers of diseases of man. Three hours lecture per week.

Zoology 610: *Genetics and Eugenics.* Three hours. Prerequisites, Zoology 401, 402, or 400.

This course deals with the fundamental laws of inheritance, their application to plant and animal breeding, and to man. Three hours lecture per week.

ZOOLOGY 611: *Vertebrate Embryology.* Four hours. Prerequisites, Zoology 401, 402, or 400.

This course includes a study of the structure, maturation and fertilization of the germ cells, and early development of vertebrate animals. Two hours lecture and two three-hour laboratory periods per week.

ZOOLOGY 620: *Personal and Community Hygiene and Sanitation.* Three hours.

This course combines former Biology 600, (Personal Hygiene and Health), with former Biology 601, (Community Hygiene and Sanitation).

A study is made of personal hygiene and healthful living with just enough emphasis upon structure of organs and organ systems to make clear their hygiene and its importance in preventing and controlling our most common diseases. This is followed by discussions on construction and sanitary operation of institutions and plants dealing with education, food and water supply, and disposal of wastes. Three hours lecture per week.

ZOOLOGY 625: *Human Anatomy and Physiology.* Three hours. Prerequisites, Zoology 401, 402, or 400.

A study is made of the structures and functions of the principal organs and organ systems of the human body. Emphasis will be placed upon the proper functioning of these in healthful living. This course is designed primarily for Physical Education, Education, and general Arts and Sciences students who desire more information concerning the human body in relation to health.

ZOOLOGY 630: *Ornithology.* Two hours.

This is a general course in bird study including identification, life histories, migrations, and relation of birds to crops, insects, other animals, and man. Two hours lecture (or equivalent in field work) per week.

THE FOLLOWING ARE MEDICAL LABORATORY TECHNIQUE COURSES

Students completing the curriculum outlined below for laboratory technique and who complete the required internship may, upon taking and passing an examination given by the American Medical Technologists, receive the M.T. rating.

This institution is recognized by the American Medical Technologists.

ZOOLOGY 640: *Clinical Pathology and Blood Chemistry.* Four hours. Prerequisite, Zoology 401, 402, or 400.

This course includes lectures, demonstrations, and recitations followed by practical laboratory work which serve to emphasize the more commonly used tests essential in the everyday practice of medicine. Students repeat all tests many times until they are thoroughly familiar with the procedure and have developed skill and accuracy essential in a busy laboratory. Clinical Pathology includes the metric system, cleaning and the sterilization of glassware, urine analysis, gastric analysis, milk analysis, and globulin tests on spinal fluid.

In Blood Chemistry, tests are made on venous blood for sugar, creatinine, urea nitrogen, uric acid, total non-protein nitrogen, chlorides cholesterol, calcium, bilirubin and others. In both courses students learn to make, titrate and standardize oll of the solutions used. Two hours lecture and two three-hour laboratory per week.

ZOOLOGY 641: *Hematology.* Four hours. Prerequisites, Zoology 401, 402, or 400.

Includes numerical counting of erythrocytes and leucocytes, cell counting in spinal fluid, hemoglobin estimation, color index, coagulation time, bleeding time, Ehrlich's and Schilling's differential counting, origin of blood cells, interpretation of blood pictures, studies of pathological blood such as infection, anemias, leukemia, lead poisoning, etc., counting of blood platelets, special tests, blood grouping and subgrouping for transfusions, thick drop examination, and bone marrow studies. Two hours lecture and two three-hour laboratory periods per week.

ZOOLOGY 642: *Parasitology and Serology.* Four hours. Prerequisites, Zoology 401, 402, or 400.

Parasitology: Students learn to identify eggs, larvae, or adults of all the human parasites, which includes those of Protozoa, Platyhelminthes, and Nemathelminthes. The life histories and method of specimen preparation are studied.

In Serology students learn to do the routine syphilitic tests and other complement fixation tests on both blood serum and spinal fluid. Two hours lecture and two three-hour laboratory periods per week.

ZOOLOGY 643: *Clinical Bacteriology.* Four hours. Prerequisites, Zoology 401, 402, or 400.

This course surveys the field of medical bacteriology making use of lectures, demonstrations, recitations, and animal innoculation along with practical application. The students make their own culture media, staining solutions, learn to handle cultures of pathogenic bacteria, Petri plate innoculation, differentiation of the various types, and to identify bacteria from specific diseases. Two hours lecture two three-hour laboratory periods per week.

ZOOLOGY 644: *Histological Sectioning and Basal Metabolism.* Two hours. Prerequisites, Zoology 401, 402, or 400.

The purpose of Histological Sectioning is the training of tissue technicians. They learn methods of fixing, dehydration, embedding, cutting, staining, and mounting of paraffin sections, together with the methods of operating the freezing microtome. Special staining tcehniques are also studied.

BASAL METABOLISM

The aim of this part of the course is to teach the care and use of the basal metabolism apparatus, preparing the patient, performing the tests, calculating and reporting the results. Two three-hour laboratory periods per week.

SCHOOL OF BUSINESS ADMINISTRATION AND ECONOMICS

BURTON A. RISINGER, Dean

HISTORY AND PURPOSE

Among the purposes listed in the original act creating the college was to give instruction in business subjects and, indeed, Tech's first graduate, Harry Howard, graduated in 1897 in business and later became the head of the department. Business courses were thus an important part of the work of the college from its very inception. The Department of Commerce progressed steadily through the years in all of its branches and in 1941 the School of Business Administration and Economics was created. The School has enjoyed a large enrollment and its graduates are constantly in demand. Its offerings have been enlarged in each department until it now has a wide range of courses in Accounting, Business Administration, Economics, and Secretarial Science.

The School of Business Administration and Economics offers the student a wide latitude in selecting the particular type of work in which he wishes to specialize. The students who desire to equip themselves with the necessary knowledges and skills to successfully hold some specific position in business, industry or government or who desire to prepare themselves for entering business on their own or who desire to obtain a sound foundation on which to do graduate work in any of several fields or who wish to obtain a general business education are all provided for in the School.

DEGREES AND CURRICULA

The degrees offered by the School are Bachelor of Arts in Economics and Bachelor of Science in Business Administration. The curriculum in Economics leads to the Bachelor of Arts degree. There is a choice of several curricula and group electives which lead to the degree of Bachelor of Science in Business Administration. These are the curricula in Accounting, Secretarial Science, Light Construction and Marketing Management, Advertising, Business and Interior Decoration, Retailing Women's Clothing, Secretary and Medical Technician, and Business Administration. The Business Administration Curriculum is not a complete curriculum in itself and it is necessary that this curriculum be combined with a major group. The major groups now available are: Business Administration of Government, Business

Administration and Pre-Law, General Business Administration, Insurance and Real Estate, and Retailing.

CERTIFIED PUBLIC ACCOUNTING PROGRAM

A special C.P.A. Program has been worked out for students who excel in Accounting during the first three years and who desire to prepare to take the state C.P.A. examination. The senior year in the Accounting curriculum is divided into the "Regular Program" and into the "C.P.A. Program." Students who excel in accounting and who receive the approval of the accounting adviser may pursue the C.P.A. Program. Other accounting students will take the Regular Program which is a strong accounting program for students who expect to become accountants in business and industry. The C.P.A. Program includes a course in Fiduciary Law and Accounting, and a year course in C.P.A. Review which includes theory and practice and law and auditing. An effort will be made to have the C.P.A. examination for North Louisiana given on the Tech Campus each spring for the convenience of the students who desire to take it.

PERSONAL RECORD BLANK

The filling out of a personal record blank is a part of the registration of all students in the School of Business Administration and Economics. Each student must fill out his undergraduate personal record blank by the beginning of the sophomore year of enrollment in the School and attach his photograph to it. The graduate personal record blank must be completed upon the student becoming a candidate for graduation in his final semester.

Curricula

ACCOUNTING CURRICULUM

(LEADING TO B.S. DEGREE IN BUSINESS ADMINISTRATION

The Accounting Curriculum is designed to give specialized and thorough training in the field and also to give a good all-round business education. The senior year is divided into the Regular Program and the C.P.A. Program. The Regular Program qualifies one to hold accounting positions in commercial and industrial enterprises and in governmental services. At the same time it gives a considerable latitude in the election of additional courses in other fields of Business or in Liberal Arts. The Regular Program is the one which most Accounting students are expected to fol-

low. The C.P.A. Program is designed for students who excel in accounting and who desire to prepare to take the C.P.A. examination. To take this Program, a student is expected to excel in accounting and must receive the approval of the accounting adviser. The C.P.A. Program includes a course in Fiduciary Law and Accounting, and a year course in C.P.A. Review which includes theory and practice and law and auditing. An effort will be made to have the C.P.A. examination for North Louisiana given on the Tech Campus each spring for the convenience of the students who desire to take it.

FRESHMAN YEAR	Semester Hours	
Accounting 401, 402 (Elementary)	8	
English 401, 402 (English Composition)	6	
Mathematics 419, 420 (Mathematics of Business)	6	
History 501, 502, or 401, 402, or Political Science 501, 502	6	
Secretarial Science 501, 502 (Elementary Typewriting)	4	
Physical Education	2	
Orientation	1	
Total		33

SOPHOMORE YEAR	Semester Hours	
Natural Science or Social Science*	6 or 8	
English 501, 502 (Literature)	6	
Economics 501, 502 (Principles)	6	
Business Administration 510 (Business Organization and Combination)	3	
Accounting 650, 651 (Cost and Intermediate)	6	
Physical Education	2	
Free elective (conditional on student having taken only six hours of natural or social science	2	
Total		31

JUNIOR YEAR	Semester Hours	
Accounting 700, 701 (Advanced Accounting)	6	
Accounting 704, 706 (Income Tax)	6	
Business Administration 645, 646 (Business Law)	6	
Mathematics of Finance 619	3	
Speech 410	3	
Electives subject to approval of Adviser	6	
Free Elective	2	
Total		32

SENIOR YEAR—REGULAR PROGRAM		
Accounting 703 (Auditing)	3	
Accounting 710 (Governmental)	3	
Business Administration 605 (Business Correspondence)	3	
Business Administration 627 (Business Statistics)	4	
Business Administration 705 (Business Machines)	3	
Business Administration 740 (Office Management)	3	
Economics 612 and 614 or 618 (Money and Banking and Investments or Corporation Finance)	6	
Electives subject to approval of Adviser	6	
Free Electives	3	
Total		34
TOTAL FOR CURRICULUM		130

SENIOR YEAR—C.P.A. PROGRAM

Accounting 703 (Auditing)	3	
Accounting 710 (Governmental)	3	
Business Administration 605 (Business Correspondence)	3	
Business Administration 627 (Business Statistics)	4	
Business Administration 705 (Business Machines)	3	
Business Administration 740 (Office Management)	3	
Economics 612 and 614 or 618 (Money and Banking and Investments or Corporation Finance)	6	
Accounting 720 (Fiduciary Law and Accounting)	3	
Accounting 730 (C.P.A.—Theory and Practice)	3	
Accounting 731 (C.P.A.—Law and Auditing)	3	
Total		34
TOTAL FOR CURRICULUM		130

*A natural science (Botany, Chemistry, Physics or Zoology) must be taken if a year in Biology, Physics or Chemistry was not taken in high school. If a year of science was taken in high school, then the student may choose a natural science or a social science. If a social science is chosen it may be in history, political science, psychology, sociology or economic geography.

CURRICULUM IN ADVERTISING

(LEADING TO B.S. DEGREE IN BUSINESS ADMINISTRATION

This curriculum provides for those students whose main interest is advertising. For such students, it provides the basic business and advertising training necessary for success and at the same time provides the best practical means of getting into the advertising field. The college graduate in advertising cannot become a general mercantile or department store advertising manager or an edvertising salesman for an advertising agency before first acquiring some experience. How to get this experience is the question which plagues most college graduates in advertising. The best way to obtain it is by doing lettering, sketching, copywriting, and layout work under the direction of an experienced advertising manager or salesman. The art required in this curriculum will give the graduate "something to sell" and after obtaining experience as indicated above, he should be able to successfully seek a position directly in advertising work. Even then the art work will be put to use in planning advertising layouts, window displays and in directing the work of commercial artists.

FRESHMAN YEAR	Semester Hours	
Natural Science or Social Science*	8 or 6	
English 401, 402 (English Composition)	6	
Mathematics 419, 420 (Mathematics of Business)	6	
History 501, 502, or 401, 402, or Political Science 501, 502	6	
Secretarial Science 501, 502 (Elementary Typewriting)	4	
Physical Education	2	
Orientation	1	
Total		31 or 33

SOPHOMORE YEAR	Semester Hours	
Accounting 401, 402 (Elementary)	8	
English 501, 502 (Literature)	6	
Economics 501, 502 (Principles)	6	
Business Administration 510 (Business Organization and Combination)	3	
Speech 410	3	
Physical Education	2	
Free elective (conditional on student having taken only six hours of science in freshman year)	2	
Art 401 (Art Structure)	2	
Art 411 (Elementary Design)	2	
Total		34

JUNIOR YEAR	Semester Hours	
Accounting 650, 651 (Cost and Intermediate)	6	
Business Administration 620, 625 (Advertising and Salesmanship)	6	
Economics 612, 629 (Money and Banking and Marketing)	6	
Mathematics of Finance 619	3	
Business Administration 605 (Business Correspondence)	3	
Psychology 501 (General)	3	
Art 450 (Elementary Drawing)	2	
Art 511 (Lettering and Poster Design)	2	
Elective	2	
Total		33

SENIOR YEAR	Semester Hours	
Business Administration 635 (Retailing)	3	
Business Administration 645, 646 (Business Law)	6	
Psychology 601 (Sales and Advertising Psychology)	3	
Business Administration 627 (Business Statistics)	4	
Economics 614 or 618 (Investments or Corporation Finance)	3	
Business Administration 660 (Newspaper Advertising)	2	
Art 564C (Art and Commerce)	3	
Art 610 (Advanced Design)	3	
Elective subject to the approval of the Adviser	3	
Free elective	2	
Total		32
TOTAL semester hours for graduation		130

*A natural science (Botany, Chemistry, Physics or Zoology) must be taken if a year in Biology, Physics or Chemistry was not taken in high school. If a year of science was taken in high school, then the student may choose a natural science or a social science. If a social science is chosen it may be in history, political science, psychology, sociology or economic geography.

CURRICULUM IN BUSINESS AND INTERIOR DECORATION

(LEADING TO B.S. DEGREE IN BUSINESS ADMINISTRATION

This curriculum is designed to provide the necessary cultural, artistic and business training for success in the business of interior decoration. Specifically, the aim of the curriculum is to prepare the student to enter any of the various phases of the business. Some interior decorators offer their services on a fee bases, sometimes jointly with

an architect. Others not only plan the home but also sell the furnishings, even perhaps manufacturing draperies and other such items as are included in the plan. Some department stores have an interior decoration department to plan the interiors of rooms and entire homes and, of course, sell the required furnishings. Both the interior decoration company and department store offer opportunities for employment and experience to the young graduate. In such work, art alone is not enough but it is also desirable to know selling, advertising, merchandising, business management, and to have a cultural education. This curriculum is designed to furnish such training. It is recommended that the graduate obtain experience in an interior decoration company or department store or take advanced training in an art school offering special training in interior decoration or both before attempting to venture into business or professional work for himself.

FRESHMAN YEAR	Semester Hours
Natural Science or Social Science*	8 or 6
English 401, 402 (English Composition)	6
Mathematics 419, 420 (Mathematics of Business)	6
Histor 401, 402 (History of the Western World)	6
Art 401 (Art Structure)	2
Art 564c (Art in Commerce)	3
Orientation	1
Physical Education	2
Total	32 or 34

SOPHOMORE YEAR	Semester Hours
Accounting 401, 402 (Elementary)	8
English 501, 502 (Literature)	6
Secretarial Science 501, 502 (Elementary Typewriting)	4
Physical Education	2
Home Economics 401 (Textiles)	3
Art 411 (Elementary Design)	2
Art 450 (Elementary Drawing)	2
Art 451 (Elementary Drawing)	2
Art 511 (Lettering and Layout)	2
Free elective conditional on student having taken only six hours of science in freshman year	2
Total	31 or 33

JUNIOR YEAR	Semester Hours
Economics 501, 502 (Principles)	6
Accounting 650, 651 (Cost and Intermediate)	6
Business Administration 620, 625 (Advertising and Salesmanship)	6
Psychology 501 (Principles)	3
Mathematics of Finance 619	3
Art 510 (Design)	3
Art 550 (Advanced Drawing)	2
Art 610 (Advanced Design)	3
Total	32

SENIOR YEAR	Semester Hours
Business Administration 635 (Retailing)	3
Economics 612 and 614, or 618 (Money and Banking and Investments)	6
Business Administration 605 (Business Correspondence)	3
Business Administration 645, 646 (Business Law)	6
Psychology 601 (Sales and Advertising)	3
Art 655 (Housing)	3
Art 656 (Housing)	3
Art 666 (History of Art)	3
Art 667 (History of Art)	2
Free Elective	1
Total	33
TOTAL semester hours for graduation	130

*A natural science (Botany, Chemistry, Physics or Zoology) must be taken if a year in Biology, Physics or Chemistry was not taken in high school. If a year of science was taken in high school, then the student may choose a natural science or a social science. If a social science is chosen it may be in history, political science, psychology, sociology or economic geography.

COMMERCIAL ART CURRICULUM

(LEADING TO B. S. DEGREE IN BUSINESS ADMINISTRATION)

This curriculum is designed for those students interested in art and its commercial applications. The curriculum gives a double major—one in Art and one in Business Administration.

FRESHMAN YEAR	Semester Hours
Art 401 (Art Structure)	2
Art 411 (Elementary Design)	2
Art 450, 451 (Elementary Drawing)	4
Art 470 (Elementary Water Color Painting)	3
Art 564 (Art Appreciation)	1
English 401, 402 (Composition)	6
History 401, 402 (Western World)	6
Mathematics 419, 420 (Business Mathematics)	6
Physical Education	2
Orientation	1
Total	33

SOPHOMORE YEAR	Semester Hours
Art 510 (Design)	3
Art 511 (Lettering and Layout)	2
Art 550 (Advanced Drawing)	2
Art 565 (Picture Study)	2
Art 570 (Oil Painting)	3
Natural Science	6 or 8
Speech 410	3
Accounting 401, 402 (Elementary)	8
Physical Education	2
Free Elective (Conditional on students having taken only six hours of science)	2
Total	33

JUNIOR YEAR	Semester Hours
Art (see note below)	8
Psychology 501 (General)	3
Psychology 601 (Sales and Advertising)	3

Economics 501, 502 (Principles)	6	
Secretarial Science 501, 502 (Typewriting)*	4	
Business Administration 620 (Advertising)	3	
Business Administration 625 (Salesmanship)	3	
Elective in Art or Business Administration	2	
Total		32

SENIOR YEAR	Semester Hours	
Art (see note below)	8	
Business Administration 612 (Money and Banking)	3	
Business Administration 605 (Business Correspondence)	3	
Business Administration 635 (Retailing)	3	
Business Administration 645, 646 (Business Law)	6	
Business Administration 629 (Marketing)	3	
Elective in Art	3	
Elective in Business Administration or Accounting	3	
Total		32
TOTAL semester hours for graduation		130

NOTE: The 16 hours in art required in the junior and senior years are as follows: Art 570 (Oil Painting), 610 (Advanced Design), 650, 651 (Life Drawing), 666, 667 (History of Art) and 670 (Oil Painting).

*Typewriting is required in this curriculum only for the students who have not had typewriting in high school or business college. If a student has sufficient typing skill to enable him or her to type a satisfactory letter, then for the four hours of typing required in the curriculum there may be substituted art or commerce electives.

ECONOMICS CURRICULUM

(LEADING TO B.A. DEGREE IN ECONOMICS)

The Economics curriculum is designed to train students either for graduate study or for service as governmental economists. It is becoming more and more necessary for economists to have at least one advanced degree. Therefore, unless the student plans to take graduate work and teach or enter governmental service as an ecinomist, it is necessary that the electives be utilized in acquiring some additional salable knowledges and skills in other departments of the School of Business Administration and Economics.

FRESHMAN YEAR	Semester Hours	
Natural Science or Social Science*	8 or 6	
English 401, 402 (English Composition)	6	
Mathematics 419, 420 (Mathematics of Business)	6	
History 401, 402 (European History)	6	
Secretarial Science 501, 502 (Elementary Typewriting)	4	
Physical Education	2	
Orientation	1	
Total		31 or 33

SOPHOMORE YEAR	Semester Hours	
English 501, 502 (Literature)	6	
History 501, 502 or Political Science 501, 502	6	
Psychology 501 (General Psychology)	3	
Economics 501, 502 (Principles)	6	
Accounting 401, 402 (Elementary)	8	
Physical Education	2	
Total		31

JUNIOR YEAR	Semester Hours
Economics 608, 610 (Labor Problems and Public Finance)	6
Economics 612, 618 (Money and Banking and Corporation Finance)	6
Foreign Language or Accounting 650, 651	6
Business Administration 619 (Mathematics of Finance)	3
Business Administration 605 (Business Correspondence)	3
Economics 607 (Economic History of the United States)	3
Electives Subject to Approval of Adviser	3
Free Electives	2 or 4
Total	32 or 34

SENIOR YEAR	Semester Hours
Economics 629, 614 (Marketing and Investments)	6
Economics 640 (Economic Thought)	3
Economics 616 or 637 (Economic Problems or Business Cycles)	3
Business Administration 645, 646 (Business Law)	6
Business Administration 627 (Business Statistics)	4
Electives Subject to approval of Adviser	9
Free Elective	3
Total	34
TOTAL semester hours for graduation	130

*A natural science (Botany, Chemistry, Physics or Zoology) must be taken if a year in Biology, Physics or Chemistry was not taken in high school. If a year of science was taken in high school, then the student may choose a natural science or a social science. If a social science is chosen it may be in history, political science, psychology, sociology or economic geography.

CURRICULUM IN LIGHT CONSTRUCTION AND MARKETING MANAGEMENT

(LEADING TO B.S. DEGREE IN BUSINESS ADMINISTRATION)

This curriculum is designed for those who wish to enter the light construction, real estate development, and-or building materials business. Specifically it is recommended for the person who expects to enter the lumber supply or hardware or electrical supply or general construction supply businesses either on the wholesale or retail level, or who expects to go on the road as salesman for an manufacturer of building materials, or who expects to become a constructor of light commercial buildings and homes either in connection with a real estate development or on single lots and either on a contract basis or on a construction and sale basis. Also opportunity exists in every town for specialization in the modernization of homes or of certain parts of homes such as kitchens, bathrooms, etc. It is hoped that many students who take this curriculum will enter business for themselves. The opportunities which lie in the building, alteration, and building supply fields is expected to last throughout the foreseable future period. It is estimated that a building boom of 15 years duration will not supply the homes needed and changing style and equipment factors have entered the field which will constantly renew the demand for newer homes and for modernization of old homes. This curriculum is Tech's contribution toward the solution of the

great sociological need for a great many additional homes and an increase in home ownership in the United States.

FRESHMAN YEAR	Semester Hours
English 401, 402 (English Composition)	6
Electrical Engineering 502 (Elementary Electricity)	3
Accounting 401 (Principles) (Taken during second semester)	4
Engineering 451 (Engineering Drawing)	2
Secretarial Science 501, 502 (Elementary Typewriting)	4
Mathematics 401 (Algebra)	3
Mathematics 402 (Trigonometry)	3
Mathematics 501 (Plane Analytic Geometry)	3
Physical Education	2
Orientation	1
Total	31

SOPHOMORE YEAR	Semester Hours
Electrical Engineering 614 (Elements of Electrical Engr.)	4
Economics 501, 502 (Principles)	6
Physics 501, 502 (General)	8
Mathematics 600, 601 (Calculus)	6
Accounting 402	4
Civil Engineering 552 (General Surveying)	2
Physical Education	2
Total	32

JUNIOR YEAR	Semester Hours
Business Administration 620, 625 (Advertising and Salesmanship)	6
Business Administration 605 (Business Correspondence)	3
Accounting 650, 651 (Cost and Intermediate)	6
English 501, 502 (Literature)	6
Civil Engineering 601 (Mechanics)	3
Civil Engineering 622 (Strength of Materials)	3
Civil Engineering 641 (Plane Surveying)	3⅓
Civil Engineering 681 (Civil Engineering Drawing)	1⅓
Electrical Engineering 714 (Illumination)	3
Total	34⅔

SENIOR YEAR	Semester Hours
Business Administration 645, 646 (Law)	6
Business Administration 641 (Real Estate)	3
Business Administration 633 (Casuality Insurance)	3
Civil Engineering 721 (Materials of Constructions)	2
Civil Engineering 731 (Reinforced Concrete Construction)	3
Engineering 731 (Contracts and Specifications)	2
Engineering 732 (Estimating)	2
Engineering (Mechanical and Electrical Equipment of Buildings)	3
Engineering (Architectural Drawing)	2
Electives subject to approval of Dean of School*	8
Total	34
TOTAL Hours for Graduation	131⅔

*Students who expect to go into the building supply business or other distribution work should take Business Administration 635 (Retailing), Business Administration 660 (Newspaper Advertising) and Psychology 601 (Psychology of Advertising and Selling). Students who expect to work in industrial firms should take Civil Engineering 602 (Mechanics), Business Administration 670 (Personnel Administration) and Economics 608 (Labor Problems). Other cases will receive special attention. In any case, the particular plans of a student may justify different electives or even a course substitution in the curriculum.

CURRICULUM IN RETAILING WOMEN'S CLOTHING
(LEADING TO B.S. DEGREE IN BUSINESS ADMINISTRATION)

This group is designed for girls who desire to make a career of women's clothing department or women's clothing store work or to establish a women's clothing store or specialty shop of their own.

FRESHMAN YEAR	Semester Hours	
Natural Science or Social Science*	6 or 8	
English 401, 402 (English Composition)	6	
Mathematics 419, 420 (Mathematics of Business)	6	
History 501, 502, or 401, 402, or Political Science 501, 502	6	
Art 401, 475 (Art Structure)	4	
Physical Education	2	
Orientation	1	
Free Elective (conditional on student having taken only 6 hours of Natural or Social Science)	2	
Total		33

SOPHOMORE YEAR	Semester Hours	
Accounting 401, 402 (Elementary)	8	
Home Economics 401 (Textiles)	3	
Home Economics 402 (Clothing)	3	
Economics 501, 502 (Principles)	6	
Business Administration 510 (Business Organization)	3	
Speech 410	3	
Secretarial Science 501, 502 (Elementary Typewriting)	4	
Physical Education	2	
Total		32

JUNIOR YEAR	Semester Hours	
Accounting 650, 651 (Cost and Intermediate Accounting)	6	
Mathematics 619 (Mathematics of Finance)	3	
Economics 612 (Money and Banking)	3	
Business Administration 605 (Business Correspondence)	3	
Home Economics 514 (Family Clothing)	3	
Home Economics 610 (Advanced Clothing)	3	
Business Administration 625 (Salesmanship)	3	
Business Administration 620 (Advertising)	3	
English 501, 502 (Literature)	6	
Total		33

SENIOR YEAR	Semester Hours	
Business Administration 645, 646 (Business Law)	6	
Business Administration 705 (Machines)	3	
Business Administration 627 (Business Statistics)	4	
Economics 614 or 618 (Investments or Corporation Finance)	3	
Home Economics 710 (Dress Design and Pattern Construction)	3	
Business Administration 629 (Marketing)	3	
Business Administration 635 (Retailing)	3	
Business Administration 660 (Newspaper Advertising)	2	
Psychology 601 (Sales and Advertising Psychology)	3	
Free Electives	2	
Total		32
TOTAL Hours for Graduation		130

*A natural science (Botany, Chemistry, Physics or Zoology) must be taken if a year in Biology, Physics or Chemistry was not taken in high school. If a year of science was taken in high school, then the student may choose a natural science or a social science. If a social science is chosen it may be in history, political science, psychology, sociology or economic geography.

SECRETARIAL SCIENCE CURRICULUM

(LEADING TO B.S. DEGREE IN BUSINESS ADMINISTRATION)

This curriculum is designed to train students for secretarial and other business positions where typing and stenographic skills are of value. It gives a good business education as well as secretarial training and is intended to enable the graduates to be of value to their firm in many ways and to quality as heads of filing and stenographic departments.

Transfer students electing this Curriculum will be required to take at least one semester of shorthand and typewriting at this institution regardless of the amount of credit they have earned elsewhere, unless excused on the basis of and examination by the curriculum adviser.

FRESHMAN YEAR	Semester Hours	
Natural Science or Social Science*	6 or 8	
English 401, 402 (English Composition)	6	
Mathematics 419, 420 (Mathematics of Business)	6	
History 501, 502, or 401, 402, or Political Science 501, 502	6	
Secretarial Science 501, 502 (Elementary Typewriting)	4	
Physical Education	2	
Orientation	1	
Total		31 or 33

SOPHOMORE YEAR	Semester Hours	
Accounting 401, 402 (Elementary)	8	
Secretarial Science 503, 504 (Advanced Typewriting)	4	
Secretarial Science 601, 602 (Elementary Shorthand)	6	
English 501, 502 (Literature)	6	
Economics 501, 502 (Principles)	6	
Physical Education	2	
Free Electives (Conditional on student having taken only six hours of science in freshman year)	2	
Total		32 or 34

JUNIOR YEAR	Semester Hours	
Secretarial Science 603, 604 (Dictation and Transcription)	8	
Accounting 650, 651 (Cost and Intermediate)	6	
English 634 (Advanced English Grammar)	3	
Business Administration 605 (Business Correspondence)	3	
Speech 410	3	
Psychology 501	3	
Electives subject to approval of Adviser	3	
Free Electives	3	
Total		32

SENIOR YEAR	Semester Hours	
Business Administration 645, 646 (Business Law)	6	
Secretarial Science 607, 608 (Secretarial Practice)	4	
Economics 612 (Money and Banking)	3	
Business Administration 705 (Business Machines)	3	
Secretarial Science 564C (Art and Commerce) or approved elective	3	
Business Administration 627 (Business Statistics)	4	
Electives Subject to Approval of Adviser	9	
Free Elective	1	
Total		33
TOTAL Hours for Graduation		130

*A natural science (Botany, Chemistry, Physics or Zoology) must be taken

if a year in Biology, Physics or Chemistry was not taken in high school. If a year of science was taken in high school, then the student may choose a natural science or a social science. If a social science is chosen it may be in history, political science, psychology, sociology or economic geography.

SECRETARY AND MEDICAL TECHNICIAN CURRICULUM

(LEADING TO B.S. DEGREE IN BUSINESS ADMINISTRATION)

This curriculum is designed for girls who desire to qualify for secretarial and medical technician positions in doctors' offices, clinics and hospitals. The student taking this curriculum qualifies for a certificate as medical laboratory technician. This secretarial and medical technology combination is of very great value to doctors as it enables them to obtain the services of someone who can do their laboratory work and also keep their books, send out bills, handle correspondence, etc., and, in fact, run all the business affairs of the office or clinic. More often than not doctors cannot justify two people for these two types of work. For these reasons, there is a great demand at good salaries for people who possess these combined knowledges and skills. In reality, this is a curriculum with two majors. The student qualifies as a secretary and also as a laboratory technician and may obtain a job in either field or a job combining both fields.

FRESHMAN YEAR	Semester Hours
Biology 401, 402	8
English 401, 402 (English Composition)	6
Mathematics 419, 420 (Mathematics of Business)	6
History 501, 502, or 401, 402, or Political Science 501, 502	6
Secretarial Science 501, 502 (Elementary Typewriting)	4
Physical Education	2
Orientation	1
Total	33

SOPHOMORE YEAR	Semester Hours
Accounting 401, 402 (Elementary)	8
English 501, 502 (Literature)	6
Economics 501, 502 (Principles)	6
Secretarial Science 503, 504 (Advanced Typewriting)	4
Secretarial Science 601, 602 (Shorthand)	6
Physical Education	2
Total	32

JUNIOR YEAR	Semester Hours
Accounting 651 (Intermediate)	3
Economics 612 (Money and Banking)	3
Secretarial Science 603, 604 (Dictation and Transcription)	8
Chemistry 401, 402 (General)	9
Biology 640 (Clinical Pathology and Blood Chemistry)	4
Biology 641 (Hermatology)	4
Free Elective	1
Total	32

SENIOR YEAR	Semester Hours	
Business Administration 645, 646 (Business Law)	6	
Economics 614 or 618 (Investments or Corporation Finance)	3	
Secretarial Science 607, 608 (Secretarial Practice)	4	
Chemistry 606 (Quantitative)	3	
Biology 642 (Parasitology and Serology)	4	
Biology 643 (Clinical Bacteriology)	4	
Biology 644 (Histological Sectioning and Basal Metabolism)	2	
Mathematics 619 (Mathematics of Finance)	3	
Business Administration 605 (Business Correspondence)	3	
Free Elective	1	
Total		33
TOTAL Hours for Graduation		130

CURRICULUM IN BUSINESS ADMINISTRATION

(LEADING TO B.S. DEGREE IN BUSINESS ADMINISTRATION)

This curriculum is designed to provide the basic courses necessary for a broad business education and to enable the students to elect a field of specialization for private business or to qualify for positions or public service in the business or professional world. It is not a complete curriculum by itself and students must understand that a major group must be chosen to complete it. Students who have not previously done so are required to consult with the dean of the school on the matter of a major group and officially register their choice during the last semester of their sophomore year.

FRESHMAN YEAR	Semester Hours	
Natural Science or Social Science*	8 or 6	
English 401, 402 (English Composition)	6	
Mathematics 419, 420 (Mathematics of Business)	6	
History 501, 502, or 401, 402, or Political Science 501, 502	6	
Secretarial Science 501, 502 (Elementary Typewriting)	4	
Physical Education	2	
Orientation	1	
Total		31 or 33

SOPHOMORE YEAR	Semester Hours	
Accounting 401, 402 (Elementary)	8	
English 501, 502 (Literature)	6	
Economics 501, 502 (Principles)	6	
Business Administration 510 (Business Organization and Combination)	3	
Speech 410	3	
Physical Education	2	
Major Group	3	
Free elective (conditional on student having taken only six hours of science in freshman year)	2	
Total		31 or 33

JUNIOR YEAR	Semester Hours	
Accounting 650, 651 (Cost and Intermediate Accounting)	6	
Mathematics of Finance 619	3	
Economics 612 (Money and Banking)	3	
Business Administration 605 (Business Correspondence)	3	
Major Group	18	
Total		33

SENIOR YEAR	Semester Hours
Business Administration 645, 646 (Business Law)	6
Business Administration 705 (Business Machines)	3
Business Administration 627 (Business Statistics)	4
Economics 614 or 618 (Investments or Corporation Finance)	3
Major Group	17
Total	33
TOTAL Hours for Graduation	130

*A natural science (Botany, Chemistry, Physics or Zoology) must be taken if a year in Biology, Physics or Chemistry was not taken in high school. If a year of science was taken in high school, then the student may choose a natural science or a social science. If a social science is chosen it may be in history, political science, psychology, sociology or economic geography.

MAJOR GROUPS*

The major fields now available are listed below. Under each major is listed the group of courses required of the students who choose that major.

BUSINESS ADMINISTRATION OF GOVERNMENT

This group is designed for students planning to make a career of service in the business management of government. This is a field of increasing importance as governments are constantly increasing their business and financial activities.

Political Science 501 (Government of the United States) I, II, orIII	3
Political Science 502 (Comparative European Governments) I or III	3
Political Science 603 (State and Local Government) III	3
Economics 608 (Labor Problems) III	3
Economics 610 (Public Finance) III	3
Political Science 614 (American Municipal Government and Administration) III	3
Business Administration 740 ,Office Management) IV	3
Business Administration 710 (Governmental Regulation of Business) IV	3
Business Administration 712 (Public Administration) IV	3
Accounting 700, 701 (Advanced Accounting) IV	6
Electives subject to the approval of the adviser	0 or 6*
Free electives to complete a total of 130 hours for graduation	5
Total	38

*If Political Science 501 and 502 are taken in the freshman year, there will be six hours of electives. If history is taken in the freshman year and political science later, there will be no elective.

BUSINESS ADMINISTRATION AND PRE-LAW

This group is designed for students who plan to take a four years college course and then attend law school. Furthermore, it is designed for students whose chief interest is civil law. A complete college education in business gives a

*Roman numerals after each course indicates the college year in which it is necessary or desirable for the course to be taken.

tremendous advantage to the civil law student in law school and to his later career. The work of successful lawyers has come to be more and more connected with the rendering of opinions, council, etc., on business matters and in doing title work. Certain Engineering courses are included on the advice of a title lawyer as being of great value in title work. Corporations employ many lawyers full time at handsome salaries for their contract and other legal work and the young lawyer who has a degree in business administration will be at a distinct advantage in obtaining and doing such work.

Even though to finish the four year course is desirable, nevertheless, the student who prefers may enter law school after finishing 3 years of this curriculum and upon receiving his LL.B. degree, may transfer his law school credits back here to take the place of the fourth year in this curriculum and receive the B.S. degree in Business Administration.

Engineering 450 (Engineering Drawing) II or III	2
Political Science 620 (Legislature) III	3
Psychology 501 (General) III	3
Economics 610 (Public Finance) III	3
Business Administration 631 (Insurance) III or IV	3
Business Administration 641 (Real Estate) IV or III	3
Business Administration 710 (Government Regulation of Business) IV	3
Business Administration 712 (Public Administration) IV	3
Accounting 704 (Income Tax) IV	3
Civil Engineering 552 (General Surveying) IV	2
Electives Subject to the Approval of the Adviser	6
Free electives to complete a total of 130 hours for graduation	4
Total	38

GENERAL BUSINESS

This group is designed for students desiring a general all around business education without particular specialization in any field and who also desire a wide latitude in electing the courses which appeal to them most.

Business Administration 620 (Advertising) III or IV	3
Business Administration 625 (Salesmanship) III or IV	3
Business Administration 631 or 632 or 633 (Insurance) III or IV	3
Business Administration 641 (Real Estate) III or IV	3
Business Administration 670 (Personnel Administration) III or IV	3
Business Administration 740 (Office Management) III or IV	3
Electives to be chosen with the advice and consent of the adviser	15
Free electives to complete a total of 130 hours for graduation	5
Total	38

INSURANCE AND REAL ESTATE

This group is designed for students who expect to enter the inurance or real estate field or to enter both fields in combination.

Psychology 501 (General) II or III	3	
Psychology 601 (Sales and Advertising Psychology) III or IV	3	
Business Administration 620 (Advertising Principles) III	3	
Business Administration 625 (Salesmanship) III	3	
Business Administration 631 (Life Insurance) III or IV	3	
Business Administration 632 (Fire and Marine Insurance III or IV	3	
Business Administration 633 (Casuality Insurance and Fidelity and Surety Bonds) III or IV	3	
Business Administration 641 (Real Estate) III or IV	3	
Business Administration 642 (Real Estate Finance and Appraisal) III or IV	3	
Electives subject to approval of adviser	6	
Free Electives	5	
Total		38

RETAILING AND SELLING

(Distributative Occupations)

This group is designed for students intending to seek a position in or to enter the retailing field or to prepare themselves for selling work.

Psychology 501 (General) II or III	3	
Psychology 601 (Sales and Advertising Psychology) III or IV	3	
Business Administration 629 (Marketing) III	3	
Business Administration 620 (Advertising) III	3	
Business Administration 625 (Salesmanship) III	3	
Business Administration 635 (Retailing) IV	3	
Business Administration 660 (Newspaper Advertising) IV	3	
Business Administration 641 (Real Estate) IV	3	
Electives Subject to Approval of Adviser (Among which B.A. 631 and 740 are recommended)	9	
Additional electives to make a total of 130 hours in the curriculum	5	
Total		38

Department of Commerce

The Department of Commerce comprises the fields of Accounting, Business Administration and Secretarial Science. The dean of the school acts as head of the department and advises students in Business Administration. Mr. Phillips and Miss Campbell advise students in Accounting and Secretarial Science, respectively.

ACCOUNTING

PROFESSOR Louis M. Phillips

ASSOCIATE PROFESSOR Harold J. Smolinski

ASSISTANT PROFESSORS Earl D. Bennett, Kermit Knighton

REQUIREMENTS FOR A MINOR IN ACCOUNTING

(For students in other schools)

Accounting 401, 402, 650, 651, 700, 701. Students in other schools may not major in Accounting. They may, of course, elect additional hours to those required for the minor and, indeed, it is recommended that they do so as the courses listed for the minor constitute the minimum requirements to prepare one for successful job performance in the field.

DESCRIPTION OF COURSES

ACCOUNTING 401: *Elements of Accounting.* Prerequisites, Business Mathematics 419, 420. Four semester hours. Three lecture and three laboratory hours.

Uses of accounting; interpretation of financial statements; sole ownership and partnership.

ACCOUNTING 402: *Elements of Accounting.* Prerequisite, Accounting 401. Four semester hours. Three lecture and three laboratory hours.

Continuation of Accounting 401; partnership and corporations.

ACCOUNTING 650: *Cost Accounting.* Prerequisite, Accounting 402. Three semester hours. Three lectures.

A study of cost systems; bookkeeping and accounting peculiar to manufacturing enterprises; making cost statements; and solving cost problems.

ACCOUNTING 651: *Intermediate Accounting.* Prerequisite, Accounting 402. Three semester hours. Three lectures.

A more detailed study of sole ownership; partnership and corporations; problems; and financial statements.

ACCOUNTING 700: *Advanced Accounting.* Prerequisite, Accounting 650, 651. Three semester hours. Three lectures.

A study of higher accountancy; problems met in practical accounting; solution of numerous problems outside of class.

ACCOUNTING 701: *Advanced Accounting.* Prerequisite, Accounting 700. Three semester hours. Three lectures.

A continuation of Accounting 700.

ACCOUNTING 702: *Practical Accounting.* Prerequisite, approval of the accounting adviser. Three semester hours. Three lectures.

A correlation of business mathematics with bookkeeping and accounting, designed to increase efficiency in the work of the student of business.

ACCOUNTING 703: *Auditing.* Prerequisites, Accounting 650, 651. Three semester hours. Three lectures.

Auditing procedure; balance sheet and detailed audits; special investigation; working papers and reports.

ACCOUNTING 704: *Income Tax.* Prerequisites, Accounting 650 and 651. Three semester hours. Three lectures.

A study of federal income tax laws and state income tax laws and their effect on individual income; solution of income tax problems; practice in making individual income tax statements on the cash base, accrual base, the calendar year, and the fiscal year.

ACCOUNTING 705: *Business Machines.* Three semester hours. (See Business Administration 705.)

ACCOUNTING 706: *Advanced Income Tax.* Prerequisite, Accounting 704. Three semester hours. Three lectures.

A continuation of Accounting 704 with further study into tax problems of fiduciaries, partnerships, and corporations; solution of problems; practice in filing income tax statements.

ACCOUNTING 710: *Municipal and Governmental Accounting.* Prerequisites, Accounting 650 and 651. Three semester hours. Three lectures.

Accounting procedures of the federal, municipal, and state governments, including, in addition to the general accounting procedures, accounting for bond funds, sinking funds, revolving funds, special assessment funds, trust funds, and utility funds. Special attention is given to the preparation of the budget, to budgetary control and to the preparation of financial statements.

ACCOUNTING 720: *Fiduciary Law and Accounting.* Prerequisites, Accounting 650 and 651. Three semester hours. Three lectures.

Law and accounting for estates, trusts, and receiverships (including liquidation) including the preparation and rendering of accounts and reports to the court; preparation of state and federal death tax returns.

ACCOUNTING 730: *C.P.A. Review—Theory and Practice.* Prerequisite, Accounting 701. Three semester hours. Three lectures.

An intensive problem course in the state and American Institute of Accountants' C.P.A. examination questions offered with a view of preparing the student to stand the C.P.A examination in theory and practice.

ACCOUNTING 731: *C.P.A. Review—Law and Auditing.*

Prerequisite, Accounting 701 and Business Administration 645, 646. Three semester hours. Three lectures.

An intensive study and problem course in the state and American Institute of Accountanst' C.P.A. examination questions and problems offered with a view of preparing the student to stand the C.P.A. examination in law and auditing.

ACCOUNTING 762: *Food—Cost Accounting.* Prerequisite, Junior standing. Three semester hours. Three lectures.

A study of accounting principles and practices with special emphasis on cost records for public and institutional food establishments.

BUSINESS ADMINISTRATION

PROFESSORS Lawrence W. Dixon, Burton R. Risinger

ASSISTANT PROFESSORS Gladys Peck, Fairy C. McBride

Other members of the college faculty who teach courses for which credit is given in Business Administration: Professors Paul Hendershot and E. M. Shirley Assistant Professors E. W. Carswell and L. E. Storey.

REQUIREMENTS FOR A MINOR IN BUSINESS ADMINISTRATION

(For students in other schools)

Accounting 401, 402; Economics 501, 502; and twelve semester hours of Business Administration courses numbered in the 600 and 700 series. Students in other schools may not major in Business Administration. They may, of course, elect additional hours to those required in the minor.

Students who expect to minor in Business Administration should consult with the Dean of the School of Business Administration and Economics and their major adviser and work out their full program. This is very important if the student desires to qualify for possible work in a given field.

Business Administration includes several fields of specialization such as insurance, banking and finance, retailing, selling and advertising, and real estate. It is recommended that the student who minors in Business Administration select one of these fields of specialization. This is not absolutely imperative, however, because the student may simply desire to obtain a general business administration minor without specialization. In any event, a conference with the Dean of the School is very desirable because his knowledge of the content of various courses and the opportunities in various fields should be of help to the student in deciding what he wants to take.

DESCRIPTION OF COURSES

BUSINESS ADMINISTRATION 510: *Business Organization and Combination.* Three semester hours. Three lectures. Open to freshmen and sophomores.

This course aims to acquaint the student with the fundamental principles of business. Various types of business enterprises are studied with special reference to the corporate form of organization. Recent legislation which affect business concerns will receive due emphasis.

BUSINESS ADMINISTRATION 601: *Sales and Advertising Psychology.* Three hours. Prerequisite, Psychology 501.

Designed to give a scientific and practical understanding of the application of the laws of human behavior to business public relations. The course covers the psychological principles related to advertising and selling. The methods of investigating, predicting and controlling human actions are emphasized.

BUSINESS ADMINISTRATION 605: *Business Correspondence.* Three semester hours. Three lectures. Prerequisites, English 401, 402, Secretarial Science 501, 502.

Practice in analyzing and composing all types of practical business letters, such as letters of application, adjustment, inquiry, collection, and sales letters; and writing business reports involving accounting and other technical business subjects.

BUSINESS ADMINISTRATION 612: *Money and Banking.* Three semester hours. (See Economics 612)

BUSINESS ADMINISTRATION 614: *Investments.* Three semester hours. (See Economics 614)

BUSINESS ADMINISTRATION 618: *Corporation Finance.* Three semester hours. (See Economics 618)

BUSINESS ADMINISTRATION 620: *Business Advertising.* Three semester hours. Three lectures. Prerequisites, Accounting 401, 402, and Economics 501, 502.

A study of the principles of advertising, thus enabling the student to appraise their effectiveness as marketing tools. Attention given to the economic aspects of advertising with reference to cost, types of media, research, and organization.

BUSINESS ADMINISTRATION 625: *Salesmanship.* Three semester hours. Three lectures. Prerequisites, Accounting 401, 402, and Economics 501, 502.

The following are considered: The salesman, merchandise, the customer, and human nature in general. Emphasis is placed on personality development. The tactful manner for selling services, ideas, or merchandise is explained and stress laid on the importance of proper approach, convincing argument, overcoming barriers, and closing the sale.

BUSINESS ADMINISTRATION 627: *Statistics I, Business Statistics.* Four semester hours. Three lectures and two laboratory hours. Prerequisites, Mathematics 419, 420. (Same as Mathematics 627)

The laboratory period will be devoted to the solving of problems with the use of computational machines.

Sampling tabulation, graphic representation, averages, dispersion and skewness, correlation, index numbers, seasonal fluctuations and cyclic application, characteristic curves, curve fitting, normal probability curve, and the probability error.

BUSINESS ADMINISTRATION 629: *Marketing.* Three semester hours. (See Economics 629)

BUSINESS ADMINISTRATION 631: *Life Insurance.* Three semester hours. Three lectures. Prerequisite, junior standing.

A comprehensive study of personal insurance which includes life insurance, it development, types of insurance and annuity contracts and their uses; health, accident and hospitalization insurance; carriers; and National Service Life Insurance (service men's insurance) and Old Age and Survivors Insurance (Social Security) and their relation to private life insurance contracts. Special emphasis is placed on the selection of life insurance contracts in connection with life insurance programs for individuals, families and institutions. The course covers the material required for Chartered Life Underwriter Examination No. 1 (B).

BUSINESS ADMINISTRATION 632: *Fire and Marine Insurance.* Three semester hours. Three lectures. Prerequisite, junior standing.

A comprehensive study of fire insurance, principles, practices, carriers, and elements of rate making including a study of extended coverage and allied fire contracts. The later part of the course is devoted to a study of inland and ocean marine insurance.

BUSINESS ADMINISTRATION 633: *Casualty Insurance.* Three semester hours. Three lectures. Prerequisite, junior standing.

A study of automobile direct loss and liability insurance; burglary, robbery, forgery, and miscellaneous coverage; credit, title, and aviation insurance; workman's compensation and unemployment compensation insurance; and surety and fidelity bonds.

BUSINESS ADMINISTRATION 635: *Retailing.* Three semester hours. Three lectures. Prerequisite, junior standing.

A general survey of the field of merchandise distribution with special attention given to policies, methods and problems of direct selling at the retail level. Also, attention is given to store organization, operation, and services.

BUSINESS ADMINISTRATION 641: *Principles of Real Estate.* Three semester hours. Three lectures, Prerequisite, junior standing.

The principles of purchasing, owning, leasing, developing, and otherwise operating real estate. Attention is given to such matters as interests in realty, liens, contracts, deeds, titles, recording, etc., as are of wide practical use to all individuals from either a personal or business point of view.

BUSINESS ADMINISTRATION 642: *Real Estate Appraisal and Finance.* Three semester hours. Three lectures. Prerequisite, junior standing.

Appraisal: Principles and methods of valuing business and residential land and improvements with local field problems designed to give practice and to show the practical relationship of valuation to successful investment and finance. Finance: Sources, methods, and documents used in financing the purchase or construction of homes, business houses, and developments.

BUSINESS ADMINISTRATION 645, 646: *Business Law.* Three semester hours each. Three lectures. Prerequisites, Accounting 401, 402, and Economics 501, 502.

A course designed to familiarize students with the legal aspects of business transactions. Subjects considered are: contracts, sales, agency, property, negotiable instruments, suretyship, bailments, carriers, insurance, partnership, corporations, torts, and business crimes.

BUSINESS ADMINISTRATION 660: *Newspaper Advertising.* Two semester hours. Two lectures. Prerequisite for School of Business students, Course 620. (Same as Journalism 660)

Fundamental study of advertising copywriting, appeals and layouts. Special emphasis is placed on retail advertising in newspapers.

BUSINESS ADMINISTRATION 670: *Personnel Administration—Industrial Relations.* Three semester hours. Three lectures. Prerequisite, junior standing.

A study of the administration of the personnel department of business and industrial enterprises; personnel policies; employment procedures and administration; and personnel practices and techniques designed to create and maintain favorable industrial relations.

BUSINESS ADMINISTRATION 705: *Business Machines.* Prerequisites, Accounting 402 and junior standing. Three semester hours. One lecture and six laboratory hours.

The lecture is devoted to a study of the use, theory, and managerial application of various types of accounting, statistical and business machines (punched card, ledger posting, billing, calculating, duplicating, time, mailing, etc.) to accounting, statistical, secretarial, clerical and general office processes, with special emphasis on the advantages and limitations of particular types of machines with reference to specific situations. The laboratory periods are devoted to practice in the operation of office machines.

BUSINESS ADMINISTRATION 710: *Governmental Regulations of Business.* Prerequisites for School of Business Students, senior standing. Three semester hours. Three lectures. (Same as Political Science 610)

Governmental regulations and operations of business; development of American policy toward business and labor; methods, scope, and problems of administrative regulation; governmental operation, promotion, and ownership of business.

BUSINESS ADMINISTRATION 712: *Public Administration.* Prerequisites for School of Business students, senior standing. Three semester hours. Three lectures. (Same as Political Science 612)

Administrative problems and organizations; financil administration; national-state and national-municipal cooperation; practices in organization for peronnel administration: recruitment, classification, training, tenure, promotion, removal, political neutrality, and retirement; organization of public employees; development of administrative law; powers and procedure of administrative agencies; law of public liability; rights of public servants.

BUSINESS ADMINISTRATION 740: *Office Management.* Three semester hours. Three lectures. Prerequisites, Accounting 401, 402, Economics 501, 502, and senior standing.

The physical needs of a business office are studied. Attention is given to office layout, equipment, personnel, organization of the different departments, job analysis, improving production standards, salary administration, preparing reports, and the problem of selecting and promoting office employees.

SECRETARIAL SCIENCE

PROFESSOR Lucille Campbell

ASSISTANT PROFESSORS Fairy C. McBride

INSTRUCTORS Christine Charles Ellis, Mrs. Zollie Meadows*, Ellen Gulley Wilhite*

REQUIREMENTS FOR A MINOR IN SECRETARIAL SCIENCE

(For students in other schools)

Secretarial Science 501, 502, 503, 504, 601, 602, 603, 604. If possible, the student should also elect Secretarial Science 607 and 608 to make a total of 26 semester hours instead of the 22 required in the minor.

DESCRIPTION OF COURSES

SECRETARIAL SCIENCE 501: *Elementary Typewriting.* Two semester hours. Five hours a week.

This course is planned for beginners and includes constant practice in touch typewriting for mastery of the keyboard, operating the typewriter parts, and writing connected matter. Placement tests will be given students presenting entrance credit and to transfer students.

SECRETARIAL SCIENCE 502: *Intermediate Typewriting.* Two semester hours. Five hours a week. Prerequisite, Commerce 501 or the equivalent.

This course is planned to develop greater skill in operating the typewriter and will include the development of accuracy and speed in writing connected matter. Practice is given in the typewriting of different types of business letters.

SECRETARIAL SCIENCE 503: *Advanced Typewriting.* Two semester hours. Five hours a week. Prerequisites, Secretarial Science 501, 502.

This course is planned to develop greater technical skill. Practice is given in typewriting of various types of business documents.

SECRETARIAL SCIENCE 504: *Advanced Typewriting.* Two semester hours. Five hours a week.

A continuation of Commerce 503, with emphasis placed on commercial papers most used in modern business.

*Acting and part time.

SECRETARIAL SCIENCE 601: *Shorthand.* (Elementary) Three semester hours. Five hours a week.

A course for beginners in Gregg Shorthand. Practice is given in reading and writing shorthand. Students who have had shorthand in high school will register for the second semester of first-year shorthand, Secretarial Science 602. If they are unable to do satisfactory work in Secretarial Science 602, they will be required to take the first semester, Secretarial Science 601. Students will have the opportunity of taking a placement test to determine which course they are best prepared to enter.

SECRETARIAL SCIENCE 602: *Shorthand.* (Intermediate) Three semester hours. Five hours a week. Prerequisite, Commerce 601.

A continuation of Secretarial Science 601 with emphasis on the development of speed in reading and dictation.

SECRETARIAL SCIENCE 603: *Dictation and Transcription.* Four semester hours. Five hours a week. Prerequisites, Commerce 601, 602.

This course is planned to develop a high degree of speed in taking dictation and in transcription.

SECRETARIAL SCIENCE 604: *Advanced Dictation and Transcription.* Four semester hours. Five hours a week.

A continuation of Secretarial Science 603.

SECRETARIAL SCIENCE 605: *Business Correspondence.* Three semester hours. (See Business Administration 605)

SECRETARIAL SCIENCE 607: *Secretarial Practice.* Two semester hours. Four hours a week. Prerequisite, Commerce 604. Open only to seniors.

The purpose of this course is to give the student a broader knowledge of the duties of a secretary and to provide practice in secretarial activities. It will afford opportunity for the further development of skill in shorthand and typewriting. It will provide practice in the filing of correspondence; in the use of duplicating machines; the handling of business reference books; and the development of desirable secretarial traits.

SECRETARIAL SCIENCE 608: *Office Practice.* Two semester hours. Five hours a week. Prerequisite, Secretarial Science 504 and 604.

Secretarial practice involving dictation and transcription of letters, reports, stencils, etc., under normal office conditions. Such duplicating devices as the Mimeograph, Ditto, Addressograph and Graphotype are used in the work of the school.

SECRETARIAL SCIENCE 705: *Office Machines.* Two semester hours. Six laboratory hours. Prerequisite, junior standing.

Practice in the operation of common office machines.

Department of Economics

PAUL HENDERSHOT, Professor and Head of the Department

PROFESSOR Paul Hendershot

ASSOCIATE PROFESSOR O. C. Miller

ASSISTANT PROFESSOR Gladys Peck

Other members of the college faculty who teach courses for which credit is given in Economics: PROFESSORS G. W. McGinty and J. E. McGee.

REQUIREMENTS FOR A MINOR IN ECONOMICS

(For students in other schools)

Economics 501, 502, 612, and twelve semester hours of economics courses numbered in the 600 and 700 series.

DESCRIPTION OF COURSES

ECONOMICS 501: *Introduction to Economics.* Three semester hours. Three lectures. Not open to freshmen.

A survey is made of economic terms; forms of business enterprise; forms and tactics of labor organizations; insurance; population problems; and development and control of money, credit, and banking.

ECONOMICS 502: *Introduction to Economics.* Three semester hours. Three lectures. Prerequisite, Economics 501.

A continuation of Economics 501. Further study is made of our system of free business enterprise, marketing, business fluctuations, index numbers, and forms of taxation; analysis is made of economic thought leading to our present economy, and examination made of other economic systems.

ECONOMICS 505: *Economics for the Household.* Three semester hours. Three lectures. Open to home economics students only.

Investments and savings, stocks and bonds, life insurance and annuities, social security, costs of living, inflation, money, banking, credit, the business cycle, budgeting, personal expenses, trusts, wills, and inheritance.

ECONOMICS 607: *Economic History of the United States.* Three semester hours. Three lectures. Prerequisites for School of Business students, Economics 501, 502. (Same as History 607)

A study of the economic forces and institutions in American life from colonial times to the present. Account is taken of the growth of population, territorial expansion, agriculture, labor, commerce, manufactures, tariff, finance, transportation, and communication.

ECONOMICS 608: *Labor Problems.* Three semester hours. Three lectures. Prerequisite, Economics 502.

The historical, descriptive, legal, and theoretical aspects of the employer-employee conflict in the United States are placed into a pattern of economic thought that gives organization to the facts.

ECONOMICS 609: *Economic Europe in the Machine*

Age. Three semester hours. Three lectures. Prerequisite for School of Business students, Economics 501, 502. (Same as History 609)

The European industrial revolution with special emphasis on the impact of the machine upon European economic life during the ninetheenth and twentieth centuries.

ECONOMICS 610: *Public Finance.* Prerequisite, Economics 502. Three semester hours. Three lectures.

First, a critical appraisal is made of the so-called "general principles and practices" relative to governments' income and out-go of money; and, second, an analysis is made of both the State's and the Nation's current public-finance affairs.

ECONOMICS 612: *Money and Banking.* Prerequisite, Economics 502. Three semester hours. Three lectures.

A study is made of the nature and functions of money, the evolution of money, and the present monetary systems of the world. Attention is give to all forms of credit instruments, to the relation of price to money and credit, to the economic effect of fluctuating prices, to the origin, development and present banking system of the United States, and a comparison is made between the United States, Canadian, and the English banking systems.

ECONOMICS 614: *Investments.* Three semester hours. Three lectures. Prerequisite, Economics 502 and Accounting 401, 402.

Investigation is made of the various types of stocks and bonds available for investment purposes; the prerequisites of a sound investment program; analyses of business factors; operating ratios of corporations; analysis of financial statements and credit risks.

ECONOMICS 616: *Contemporary World Problems.* Three semester hours. Three lectures. Prerequisites, Economics 501, 502.

Designed for students wishing an organized picture of current world events and problems. Special study is made of social security, the labor movement, the farm problem, the government lending-spending program, current taxation policies, our foreign policy, changes in philosophy and functions of government. Consideration is also given to problems of international finances, trade, and reconstruction.

ECONOMICS 618: *Corporation Finance.* Three semester hours. Three lectures. Prerequisites, Economics 501, 502, and Accounting 401, 402.

A survey is made of the process of organizing, managing, and expanding corporate organizations. Attention is given to the various types of stocks and bonds which a corporation may issue, to its financial policies, eand to its growth and development. Further consideration is given to mergers, consolidations, holding companies, business trusts, and other steps of business expansion.

ECONOMICS 620: *Principles and Problems of Agricultural Economics.* Three semester hours. Three lectures. Prerequisite, Economics 501.

The course includes a survey of the rise of modern agricultural technology, institutions, and theory; a treatment of the customary principles of

agricultural economics; a consideration of the popular ideas concerning economic evils and economic reforms; a critical analysis of the various governmental efforts to solve the farm problem during the last generation; an analysis of the effect on the agricultural economy of the methods in which farm prices are established in relation to largely "administered" prices of the things which the farmer has to buy; and the effect of mechanization on the farm economy.

ECONOMICS 629: *Principles of Marketing.* Three semester hours. Three lectures. Prerequisites, Economics 501 and 502.

Study is made of wholesalers and retailers, auctions, direct marketing, mail-order houses, chain-stores, speculative markets, consumers' cooperatives, and other institutions for distributing goods and services. Emphasis is placed on consideration of lowering costs of marketing.

ECONOMICS 630: *Principles and Practice of Agricultural Marketing.* Three semester hours. Three lectures. Prerequisite, Economics 501.

The course includes two things. First, it treats of the methods and channels of agricultural marketing, giving attention to Governmental action having to do with the marketing process. Second, it examines the economic process sufficiently for the students to form opinions concerning the extent to which the American "agricultural problem" is a marketing problem that lends itself to solution.

ECONOMICS 637: *Business Cycles.* Three semester hours. Three lectures. Prerequisite, Economics 501, 502.

A study of business cycles, their history, characteristics, causes; proposals advanced for the control of business cycles and efforts on the part of the government to mitigate their effects.

ECONOMICS 640: *Development of Economic Thought.* Three semester hours. Three lectures. Prerequisite, six hours of advanced economics or the instructor's permission.

A survey is made (description and critical appraisal) of man's thought on economic matters from the ancient period to the present day.

ECONOMICS 710: *Governmental Regulation of Business.* Three semester hours. (See Business Administration 710)

ECONOMICS 712: *Public Administration.* Three semester hours. (See Business Administration 712)

SCHOOL OF EDUCATION

GEORGE W. BOND, Dean

Department of Education

GEORGE W. BOND, PROFESSOR AND HEAD OF THE DEPARTMENT. PROFESSORS THOMAS A. GREEN, GEORGE C. PORET, R. L. VINING; ASSOCIATE PROFESSORS ROBERT H. MOUNT, DENNIS P. NOAH; CRITIC TEACHERS: MARY B. JARRELL (FIRST GRADE), CORA ETHEL WASHBURN (SECOND GRADE), FRANCES MAXINE PEPPER (THIRD GRADE), FLORA MAE CUNNINGHAM (FOURTH GRADE), MRS. O. C. MILLER (FIFTH GRADE), LEOLA RODGERS (SIXTH GRADE), BERNICE O'NEAL (SEVENTH GRADE); LORRAINE PONDER, HOME ECONOMICS; THESTA ANN WALKER, LIBRARIAN.

Louisiana Polytechnic Institute is one of the colleges approved by the State Board of Education for the professional preparation of teachers. Through its School of Education Tech offers its fullet co-operation to the State Board of Education in giving the schools of the state professionally trained teachers.

The School of Education is organized into several curricula leading to the baccalaureate degree in education. Each curriculum is designed to prepare for a specific type of teaching service. Therefore, the new students enrolling in the School of Education should consult the Dean for advice in choice of a curriculum.

Students who complete a four-year curriculum are granted the bachelor's degree and are entitled to teach their specialties in any approved high school in the state; and to teach in any of the accredited schools belonging to the Association of Colleges and Secondary Schools of the Southern States.

In all curricula except Art, Business Education, Music, and Elementary Grade, the student will select a minor teaching field and meet the certification requirements in that field.

STUDENT TEACHING

For the students who are preparing to teach in the elementary grades there is conducted on the campus a well-equipped and officered elementary school. The work of this school conforms with the course of study of the elementary schools as prescribed by the State Department of Education of Louisiana.

For students who are preparing to teach in the high school, arrangements will be made for practice teaching in

the Ruston high school, or in high schools of other towns.

A student to be assigned student teaching must up to that time have earned at least a grade average of C. All the academic prerequisites to student teaching must be carefully observed.

ART CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
History 401, 402	6	
Mathematics 405, 406	6	
Freshman Orientation	1	
Art 401: Art Structure	2	
Art 411: Elementary Design	2	
Art 450, 451: Elementary Drawing	4	
Art 564: Art Appreciation	1	
Art 470: Elementary Painting	3	
Physical Education: Freshman Activity	2	33
SOPHOMORE YEAR	**Semester Hours**	
English 501, 502	6	
Botany 402, Zoology 400	8	
Psychology 501, 504	6	
Art 510: Design	3	
Art 550: Advanced Drawing	2	
Art 565: Picture Study	2	
Art 570: Oil Painting	3	
Physical Education: Sophomore Activity	2	32
JUNIOR YEAR	**Semester Hours**	
Education 500 or 504, 502 or 503	6	
History 501, 502	6	
Science—4 hours of a physical science	4	
Art 540, 541: Craft Survey	6	
Education 660: Teaching of Art	3	
Art 666, 667: Art History	6	
Physical Education 621	1	32
SENIOR YEAR	**Semester Hours**	
Education 612	2	
Education 713	5	
Sociology 501	3	
Art 610: Advanced Design	3	
Art 650, 651: Life Drawing	4	
Art Electives—6 hours in advanced Art	6	
Physical Education 500	3	
Electives	7	33
TOTAL semester hours in curriculum		130

BUSINESS EDUCATION CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Mathematics 419, 420	6	
Secretarial Science 501, 502	4	
Botany 402, Zoology 400	8	
History 501, 502	6	
Freshman Orientation	1	
Physical Education: For Women, Select two from 412-417 For Men, Select two from 401-408	2	33

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Secretarial Science 503, 504	4	
Secretarial Science 601, 602	6	
Psychology 501, 504	6	
Accounting 401, 402	8	
Physical Education 621	1	
Physical Education: For Women, Select two from 530, 540, 560, 561		
For Men, Select two from 501, 502	2	33
JUNIOR YEAR	**Semester Hours**	
Secretarial Science 603, 604	8	
Economics 501, 502	6	
Education 500 or 504 or 605	3	
Physics 505, 506, or Chemistry 401, 402	6 or 8	
Accounting 650	3	
Education 606	3	
Education 658: Methods in Commercial Education	3	32 or 34
SENIOR YEAR	**Semester Hours**	
Business Administration 625	3	
Business Administration 645, 646	6	
Accounting 651	3	
Business Administration 635	3	
Physical Education 500	3	
Education 714	5	
Education 612: Measurement in Education	2	
Secretarial Science 705	2	
Elective	3 or 5	30 or 32
TOTAL semester hours in curriculum		130

ENGLISH CURRICULUM

FRESHMAN YEAR	Semester Hours	
Botany 402, Zoology 400	8	
English 401, 402	6	
Mathematics 405, 406	6	
Speech 410	3	
Freshman Orientation	1	
Physical Education: Select two from 412-417	2	
Elective in minor subject	6	32
SOPHOMORE YEAR	**Semester Hours**	
Physics 505, 506, or Chemistry 407, 408	6 or 8	
English 501, 502	6	
History 501, 502	6	
Psychology 501, 504	6	
Physical Education: Select one from 530, 540, 560, 561, and one from 570-582	2	
Elective in minor subject	6	32 or 34
JUNIOR YEAR	**Semester Hours**	
English 618, 622	6	
English 632	3	
Education 500 or 504 or 605	3	
Education 606	3	
Social Science: Economics, Geography, Political Science, Sociology (selected with the advice of the department head)	6	
Physical Education 500	3	
Library Science 606, 607	6	
Elective in minor subject	4	34

SENIOR YEAR	Semester Hours	
English: Senior College English (numbered in 600's)	9	
Library Science 606	3	
Education 650: Methods of Teaching English	3	
Education 612: Measurement in Education	2	
Education 714	5	
Physical Education 621	1	
Elective	7 or 9	30 or 32
TOTAL semester hours in curriculum		130

FRENCH CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Botany 402, Zoology 400	8	
Mathematics 405, 406	6	
Speech 410	3	
French 401, 402	6	
Freshman Orientation	1	
Physical Education: Freshman Activity	2	32

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
French 501, 502	6	
History 501, 502	6	
Physics 505, 506 or Chemistry 407, 408	6 or 8	
Psychology 501, 504	6	
Physical Education: Sophomore Activity	2	32 or 34

JUNIOR YEAR	Semester Hours	
French 550, 551 and three hours from 600, 605, 620, 621, 700	9	
Education 500 or 504 or 605, and 606	6	
Sociology 501	3	
Political Science 501 or 603	3	
Physical Education 500	3	
English 622	3	
Elective	6	33

SENIOR YEAR	Semester Hours	
French—nine hours from 600, 605, 620, 621, 700	9	
Education 651	3	
Education 612	2	
Education 714	5	
Physical Education 621	1	
Elective	11 or 13	31 or 33
TOTAL semester hours in curriculum		130

MATHEMATICS CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Botany 402, Zoology 400	8	
Mathematics 401, 402, 403	9	
Freshman Orientation	1	
History 501, 502	6	
Physical Education: Select two from 412-417	2	32

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Mathematics 501, 502, 460	9	
Psychology 501, 504	6	
Physics 501, 502	8	
Physical Education: Select one from 530-540, or 560-561, and one from 570-582	2	31

JUNIOR YEAR	Semester Hours	
Mathematics 600, 601	6	
Education 500 or 504 or 605, and 606	6	
Sociology 501	3	
Political Science 501 or 603	3	
Physical Education 500, 621	4	
Speech 410	3	
Elective	9	34

SENIOR YEAR	Semester Hours	
Mathematics 602, and one course numerically above Mathematics 602	6	
Education 656: Methods in Mathematics	3	
Education 612: Measurement in Education	2	
Education 714: Practice Teaching	5	
Elective	17	33
TOTAL semester hours in curriculum		130

MUSIC CURRICULUM FOR TEACHERS AND SUPERVISORS OF VOCAL AND INSTITUTIONAL MUSIC

After completing this curriculum, the graduate will be entitled to receive state certification to teach band, orchestra anr vocal music in the schools.

FRESHMAN YEAR	Semester Hours	
Freshman Orientation	1	
English 401, 402	6	
Speech 410	3	
History 501	3	
Theory 410, 411	6	
Voice 452, 453	4	
Piano 452, 453	4	
Major Instrument 452, 453 (string)	4	
Ensemble	2	
Physical Education	2	35

SOPHOMORE YEAR	Semester Hours	
English 501	3	
Mathematics	6	
History 502	3	
Psychology 501, 504	6	
Theory 501, 502	6	
Voice 552, 553	4	
Piano 552	2	
Major Instrument 552, 553 (string)	4	
Minor Instrument	2	
Ensemble	2	
Physical Education	2	40

JUNIOR YEAR	Semester Hours	
Physics 504	3	
Education 500 or 504	3	
Music Education 660	2	
Education 612	2	
Theory 601, 602	6	
Music History 620, 621	6	
Conducting 720	2	
Voice 652, 653	4	
Major Instrument 452, 453 (wind)	4	
Minor Instrument	2	
Ensemble	2	
Physical Education 500	3	39

SENIOR YEAR	Semester Hours	
Social Science	6	
Science	9	
Music Seminar 774 or 775	1	
Theory (from 701, 680, 520, 510)	3	
Music Education 760	3	
Orchestration 712	3	
Major Instrument 552, 553 (wind)	4	
Minor Instrument	2	
Ensemble	2	
Education 713 or 714	5	
Physical Education 621	1	39

FIFTH YEAR

Music Recital—Required of those taking 18 hours or more in any one field of applied music.

TOTAL semester hours in curriculum 153

MUSIC MAJORS CURRICULUM

After completing the curriculum below the graduate will be eligible for certification from the State Department of Education to teach band, orchestra, or vocal work in the schools, depending upon the particular applied music elected during the course. Upon entrance the student will declare the particular certification desired and the appropriate courses will then be entered upon his advisory sheet in the Music Department Office.

FRESHMAN YEAR	Semester Hours	
Freshman Orientation	1	
English 401, 402	6	
Speech 410	3	
History 501, 502	6	
Theory 410, 411	6	
Applied Music	8	
Ensemble	2	
Physical Education	2	34

SOPHOMORE YEAR	Semester Hours	
English 501	3	
Mathematics	6	
Psychology 501, 504	6	
Theory 501, 502	6	
History of Music 620, 621	6	
Applied Music	8	
Ensemble	2	
Physical Education	2	39

JUNIOR YEAR	Semester Hours	
Social Science	6	
Science	8	
Education 500, or 504	3	
Theory 601, 602	6	
Applied Music	8	
Music Education 660	2	
Ensemble	2	
Physical Education 500	3	38

SENIOR YEAR	Semester Hours	
Education 713 or 714	5	
Science	4	
Education 612	2	
Music Seminar 774 or 775	1	
Theory (From 701, 521, 680, 510)	3	
Orchestration 712	3	
Conducting 720	2	
Applied Music	6	
Music Education 760	3	
Ensemble	2	
Physical Education 621	1	32
TOTAL semester hours in curriculum		143

SCIENCE CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Mathematics 401, 402	6	
Botany 402, Zoology 400	8	
History 501, 502	6	
Speech 410	3	
Freshman Orientation	1	
Physical Education: Freshman Activity	2	32

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Botany 520 or 521	3	
Zoology 501 or 502	4	
Chemistry 401, 402	9	
Psychology 501, 504	6	
Sociology 501	3	
Physical Education: Sophomore Activity	2	33

JUNIOR YEAR	Semester Hours	
Physics 505, 506	6	
Political Science 501 or 603	3	
Chemistry 605, 606	6	
Education 500 or 504 or 605, and 606	6	
Physical Education 500, 621	4	
Elective	8	33

SENIOR YEAR	Semester Hours	
Physics 507, 508	6	
Education 612	2	
Education 652: Methods in H. S. Science	3	
Education 714	5	
Elective	16	32
TOTAL semester hours in curriculum		130

SOCIAL SCIENCE CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Botany 402, Zoology 400	8	
History 401, 402	6	
Mathematics 405, 406	6	
Speech 410	3	
Freshman Orientation	1	
Physical Education: Select two from 412-417	2	32

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
History 501, 502	6	
Psychology 501, 504	6	
Physics 505, 506 or Chemistry 407, 408	6 or 8	
Physical Education: Select one from 530, 540, 560, 561 and one from 570-582	2	
Electives	6	32 or 34

JUNIOR YEAR	Semester Hours	
Education 500 or 504 or 605, and 606	6	
Library Science 606	3	
Physical Education 500	3	
Political Science 501, 603	6	
Sociology 501, 502	6	
History (two advanced courses)	6	
Elective	3	33

SENIOR YEAR	Semester Hours	
History 607 or 609, and 760	6	
Library Science 607	3	
Physical Education 621	1	
Education 653	3	
Education 612: Measurement in Education	2	
Education 714 Observation and Practice Teaching	5	
Elective	10 or 12	30 or 32
TOTAL semester hours in curriculum		130

SPANISH CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Botany 402, Zoology 400	8	
Mathematics 405, 406	6	
Speech 410	3	
Spanish 401, 402	6	
Freshman Orientation	1	
Physical Education: Freshman Activity	2	32

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Spanish 501, 502	6	
History 501, 502	6	
Physics 505, 506 or Chemistry 407, 408	6 or 8	
Psychology 501, 504	6	
Physical Education: Sophomore Activity	2	32 or 34

JUNIOR YEAR	Semester Hours	
Spanish 601, 602	6	
Spanish—three hours in courses in 600's or above	3	
Education 500 or 504 or 605, and 606	6	
Sociology 501	3	
Political Science 501 or 603	3	
Physical Education 500	3	
English 622	3	
Electives	6	33

SENIOR YEAR	Semester Hours	
Spanish—nine hours in courses in 600's or above	9	
Education 612	2	
Education 651	3	
Education 714	5	
Physical Education 621	1	
Elective	11 or 13	31 or 33
TOTAL semester hours in curriculum		130

ELEMENTARY GRADE CURRICULUM

FRESHMAN YEAR	Semester Hours	
Art 401, 402, or Music 401, 402	4	
Botany 402, Zoology 400	8	
English 401, 402	6	
Freshman Orientation	1	
Geography 425, 427	6	
Mathematics 405, 406	6	
Physical Education: Select two from 412-417	2	33

SOPHOMORE YEAR	Semester Hours	
Art 401, 402 or Music 401, 402	4	
Education 500	3	
English 501, 502	6	
History 501, 502	6	
Physical Education 430, 520	2	
Psychology 501, 504	6	
Science: Physics 505, 506, or Chemistry 407, 408	6 or 8	33 or 35

JUNIOR YEAR	Semester Hours	
Art 501	2	
Education 501	3	
Education 502 or 503	3	
Education 680	3	
English 632	3	
Music 630	2	
Physical Education 500	3	
Physical Education 640	2	
Speech 410	3	
Speech 620	3	
Education 504	3	
Elective	3	33

SENIOR YEAR	Semester Hours	
Education 505: Materials and Methods in Language Arts for Elementary Grades	3	
Education 612: Measurement in Education	2	
Education 507	3	
Education 713	5	
History 760	3	
Physical Education 621	1	
Physical Education 641	2	
Elective	10 or 12	29 or 31
TOTAL semester hours in curriculum		130

HEALTH AND PHYSICAL EDUCATION CURRICULUM FOR WOMEN

FRESHMAN YEAR	Semester Hours	
English 401, 402	6	
Botany 402, Zoology 400	8	
Mathematics 405, 406	6	
Freshman Orientation	1	
History 501, 502	6	
Physical Education 403, 404	2	
Physical Education 540M, 550M	2	
Elective	1	32

SOPHOMORE YEAR	Semester Hours
English 501, 502	6
Physics 504	3

Psychology 501, 504	6	
Home Economics 501	3	
Speech 410	3	
Physical Education 503, 504, 530, 421	4	
Physical Education 500	3	
Physical Education 520, 521	3	
Elective	1	32

JUNIOR YEAR	Semester Hours	
Education 500 or 504 or 605, and 606	6	
Zoology 625	3	
Art 564 or Music 630	2	
Political Science 501 or 603	3	
Sociology 501	3	
Physical Education 611, 613	5	
Physical Education 626	3	
Elective	8	33

SENIOR YEAR	Semester Hours	
Education 612	2	
Education 657	3	
Education 714	5	
Physical Education 621, 605	4	
Physical Education 640	2	
Physical Education 660	3	
Physical Education 610, 620	6	
Physical Education Elective	3	
Elective	5	33
TOTAL semester hours in curriculum		130

TEACHER EDUCATION CURRICULUM IN HEALTH AND PHYSICAL EDUCATION FOR MEN

FRESHMAN YEAR	Semester Hours	
Freshman Orientation	1	
English 401, 402	6	
Mathematics 401, 402; or 405, 406	6	
Botany 402, Zoology 400	8	
Physical Education 401, 402, 406, 407, 408, 420, 490	9	
Electives	2	32

SOPHOMORE YEAR	Semester Hours	
English 501, 502	6	
Psychology 501, 504	6	
Speech 410	3	
Physical Education 500, 501, 502, 507, 508, 590	12	
History 501, 502	6	33

JUNIOR YEAR	Semester Hours	
Zoology 620, 625	6	
Education 500 or 504 or 605, and 606	6	
Physics 504	3	
Physical Education 601, 602, 604, 605, 620, 621, 626, 641	17	32

SENIOR YEAR	Semester Hours	
Education 612	2	
Education 657	3	
Education 714	5	
Physical Education 704	3	
Sociology 501	3	
Political Science 501 or 603	3	
Electives	14	33
TOTAL semester hours in curriculum		130

DESCRIPTION OF COURSES

EDUCATION

EDUCATION 500: *Foundations of Education.* Three hours. Prerequisite, sophomore standing.

A course designed to help the student find himself in the profession of teaching, and to develop in him a professional attitude.

EDUCATION 501: *Principles of Teaching in the Elementary Grades.* Three hours. Prerequisite, Psychology 504. requisite, Psychology 504.

A course for the study of such topics as: Objectives in teaching, organization of subject matter, types of lessons, the recitation, lesson planning, problems in class control, etc.

EDUCATION 502: *Methods of Teaching in the Lower Elementary Grades.* Three hours. Prerequisites, Psychology 504, Education 500.

A critical treatment of materials and methods of instruction in the lower elementary grades.

EDUCATION 503: *Methods of Teaching in the Upper Elementary Grades.* Three hours. Prerequisites, Psychology 504, Education 500.

A critical treatment of materials and methods of instruction in the upper elementary grades.

EDUCATION 504: *History and Philosophy of Education.* Three hours.

A study of the religious, political, economic, industrial, and other social influences which gave rise to our present concepts and practice in education.

EDUCATION 505: *Materials and Methods in Language Arts for the Elementary Grades.* Three hours. Prerequisite, Psychology 504.

A course to acquaint teachers with the materials available for use in the language arts program of the elementary school. Research, principles, and methods pertaining to the teaching of reading will be emphasized.

EDUCATION 507: *Use of Audio-Visual Aids in the Classroom.* Three hours.

Members of the class will study the operation and use of the lantern slide, film strip, opaque and motion picture projectors. Particular stress will be placed on the effective use of visual aids in the classroom. Teaching films in the Tech Film Library will be reviewed and evaluated.

EDUCATION 529: *The Teacher as a Citizen.* Three hours.

The aim of this course is to bring the prospective teacher into a closer awareness of civic affairs of interest to all thinking citizens. Problems are considered such as those pertaining to family life, industry, rural living, health, recreation, the influence of propaganda, and current affairs.

EDUCATION 605: *Secondary Education.* Three hours. Prerequisite, Psychology 504.

The study of the historiacl development of American Secondary Education, and a survey of its present status. Emphasis is placed upon philosophical interpretation. Brief attention is given to European secondary education, and the Louisiana system of secondary education is studied carefully.

EDUCATION 606: *Secondary Education.* Three hours. Prerequisites, Psychology 504, Education 605.

The aim of this course is to acquaint the prospective high school teacher with procedures and techniques which apply generally to high school teaching.

EDUCATION 612: *Measurements in Education.* Two hours. Prerequisites, Psychology 504 and Education 606 or 502 or 505.

A course designed to acquaint the student with the principles of measurement, types of tests, the essentials of good questions, and objective and standardized tests.

EDUCATION 615: *Administration and Supervision.* Three hours. Prerequisites, for students interested in the high school, Education 605 and 606; for students interested in the elementary school, Education 502 or 503.

EDUCATION 633: *Problems of Education.* Three hours. A seminar. Before registering for this course the student must consult the head of the Department of Education.

EDUCATION 650: *Materials and Methods in English.* Three hours. Prerequisite, twelve hours of English.

The student will be introduced to the best techniques of organizing and presenting English material at the high-school level.

EDUCATION 651: *Materials and Methods of Modern Language.* Three hours. Prerequisite, twelve hours of modern language.

The student will be introduced to the latest techniques of organizing materials and presenting them to the high-school pupils.

EDUCATION 652: *Materials and Methods in Science.* Three hours. Prerequisites, Psychology 504 and Education 606.

A careful examination of the most advanced methods of organizing and presenting the materials in natural sciences for the secondary school.

EDUCATION 653: *The Teaching of Social Science.* Three hours.

An examination of the history, character, and purpose of Social Science is followed by the presentation of appropriate teaching suggestions.

EDUCATION 656: *Materials and Methods in Mathematics.* Three hours. Prerequisite, Mathematics 501, or sufficient teaching experience.

The nature of mathematics and the outline of the course, methods of teaching arithmetic, algebra, plane and solid geometry, and an introduction to the teaching of trigonometry. Many selected problems will be

solved to illustrate the fundamentals. Special emphasis will be placed upon the interpretation and solving of reading problems.

EDUCATION 657: *Materials and Methods of Health and Physical Education.* Three hours. Prerequisite, Junior standing.

An introduction to the most advanced methods and the best materials used at the high school level.

EDUCATION 658: *Materials and Methods in Commerce.* Three hours. Prerequisite, Junior standing.

A course designed to acquaint the student with the best practices in teaching commercial subjects at the high-school level.

EDUCATION 660: *Materials and Methods of Art.* (The same as Art 660). Three hours.

EDUCATION 680. *Nature Study.* Three hours.

A study is made of trees, flowers, birds, insects, weather phenomena and such other convenient material as the teacher may find valuable in bringing the child and youth into closer contact with the world about him.

EDUCATION 713: *Observation and Student Teaching in the Elementary School.* Five hours. Prerequisites, Psychology 504, Education 500, 501, 502 (or 503); Speech 410, and a grade average of C.

EDUCATION 714: *Observation and Student Teaching in the Secondary School.* Five hours. Prerequisites, Psychology 504; Education 500 or 504 or 605 and 606; Speech 410, and a grade average of C.

GEOGRAPHY

GEOGRAPHY 425: *Principles of Geography. Three* hours.

An introductory course in geographic principles and a study of man's relation to his natural environment of location, climate, soils and minerals, water bodies and land forms.

GEOGRAPHY 427: *Geography of Louisiana.* Three hours.

A course to familiarize students with the main factors, cultural and natural, which are influencing the development of Louisiana, and to inspire a greater love and appreciation of our state.

GEOGRAPHY 601: *Human Geography.* Three hours.

A study of the influence of geographic factors—earth relations, climate, location, surface features, soils and minerals, flora and fauna, transportation and communication—upon the activities of man.

GEOGRAPHY 602: *Conservation of Natural Resources.* Three hours.

A study of the conservation of soils, minerals, forests, water, wild life, human resources, etc.

GEOGRAPHY 625: *Economic Geography of the United States and Canada.* Three hours.

A study of the geographic factors involved in the agricultural, industrial, economic and commercial development of the United States and Canada. Considerable practice is given in the graphic presentation of geographic data.

GEOGRAPHY 626: *Economic Geography of Latin America, Eurasia, Africa, and Australia.* Three hours. Prerequisite, Geography 625.

A study of the geographic factors involved in the agricultural, industrial economic and commercial growth of the world outside the United States and Canada. Outline maps of the continents are filled in, showing location, distribution, and use of the main world resources.

LIBRARY SCIENCE

To meet the needs for part-time and full-time librarians in the public schools of the State, the courses in Library Science have been revised and expanded. Students who are planning to teach in the elementary grades or to teach English, foreign language, or social science in the high school are encouraged to take at least twelve hours of library science to enlarge their opportunity for service in the field.

LIBRARY SCIENCE 605: *Books and Materials for the Elementary School.* Three hours.

The course is designed to acquaint the student with the materials and books used in the elementary school and to give training in the selection and distribution of such materials in such a way as to encourage a broad literary experience on the part of the children.

LIBRARY SCIENCE 606: *Books and Materials for the Adolescent Child.* Three hours.

A study of the library materials suitable for the adolescent years, together with critical study of the standards and criteria for the selection of such materials for the adolescent child's needs.

LIBRARY SCIENCE 607, 608: *Administration of School Libraries and Classification, Cataloguing, and Organization of Materials.* Three hours for each course.

Designed to train for leadership in a program of library service in the public school system. The course includes instruction in the selection, acquiring, and administering of all types of library materials.

PSYCHOLOGY

PSYCHOLOGY 501: *General Psychology.* Three hours.

A study of the fundamental processes and problems of human behavior. Also a consideration of the psychological principles underlying teaching and learning.

PSYCHOLOGY 502: *Mental Hygiene.* Three hours. Prerequisite, Psychology 501.

A study of mental health, problems of adjustment and self-management, the development of balance, poise, and personality.

PSYCHOLOGY 503: *Abnormal Psychology.* Three hours. Prerequisite, Psychology 501.

A study of mental abnormalities as they affect the individual. The more common mental disorders are considered and classified. Suggestions as to diagnosis, care, and treatment are made. Individual papers and class reports will be prepared.

PSYCHOLOGY 504: *Educational Psychology.* Three hours. Prerequisite, Psychology 501.

A course designed to meet the needs of prospective teachers by bringing an application of psychological principles to the problems of instruction.

PSYCHOLOGY 505: *Child Psychology.* Three hours. Prerequisite, Psychology 501.

A study of the physical and mental growth of the child, his social emotional, motor development, interests, and imaginative activities. Opportunities will be given for studying children at play and in school Special reports will be prepared and individual studies made.

PSYCHOLOGY 601: *Sales and Advertising Psychology.* Three hours. Prerequisite, Psychology 501.

Designed to give a scientific and practical understanding of the application of the laws of human behavior to business public relations. The course covers the psychological principles related to advertising and selling. The methods of investigating, predicting and controlling human actions are emphasized.

PSYCHOLOGY 604: *Social Psychology.* Three hours. Prerequisites, Psychology 502 or 504, Sociology 501.

A study of the nature of social behavior, social stimulation and response; a psychological analysis of society and social institutions.

PSYCHOLOGY 605: *Fields of Psychology.* Three hours. Prerequisite, Psychology 502.

A seminar for the study of the major fields of Psychology and their chief proponents.

SCHOOL OF ENGINEERING

ROY T. SESSUMS, Dean

The School of Engineering offers courses of instruction and study for the primary purpose of preparing young men for entry into the engineering profession so that they may benefit society as a whole. The degree granted upon the completion of the required course of study is one of the following:

Bachlor of Science in Chemical Engineering.
Bachelor of Science in Civil Engineering.
Bachelor of Science in Electrical Engineering.
Bachelor of Science in Mechanical Engineering.

The Engineering School is located in Bogard Hall. In this building are the classrooms, library, and laboratories for chemical, civil, electrical and mechanical engineering, and the departments of Physics and Mathematics.

The laboratories are adequately equipped so that proper instruction and training may be given to students in the operation and care of the equipment used in the field of study which they have chosen.

MINIMUM REQUIREMENTS FOR ADMISSION

In addition to meeting the general entrance requirements to Louisiana Polytechnic Institute (page 24, this bulletin), the student, for unconditional entrance to the School of Engineering, must present as part of his college entrance credits from his high school the following units:

English	3	units
Algebra	1½	units
Plane Geometry	1	unit
Chemistry or Physics	1	unit (Preferably chemistry)

Where a deficiency of the above entrance requirements exists, the student is not prohibited from entering the School of Engineering, as provisions are made for the student to take special non-credit courses in mathematics in order to make up this deficiency. However, it is strongly recommended that the student come to Louisiana Tech fully prepared to meet these minimum entrance requirements.

SCHOLARSHIP REQUIREMENTS

The School of Engineering is aware of its responsibility of training men for public service; therefore, it must hold exacting standards of achievement for those students to whom it gives its approval. Since the sciences, especially physics, chemistry, and mathematics, are the basis of any sound engineering curriculum, satisfactory work is essential in these depatrments during the first two years.

An average grade of "C" in all work in the freshman year, including any courses necessary to remove entrance conditions, is required for an unconditional entrance into the sophomore year of the School of Engineering.

If a "C" average is not made in the freshman year, the student may continue in the freshman division the second year, subject to the ruling on scholastic probation. He may take not more than 16 hours of credit per semester in his second (sophomore) year and must have a "C" average for the two years to continue in the School of Engineering.

It is recommended that "drive-in" students and all students who enter with a condition should consider the advisability of summer work or of taking five years to complete the course for a degree.

ADMISSION TO ADVANCED STANDING

A candidate for admission to the School of Engineering by transfer from another institution must submit a satisfactory record in scholarship and in conduct from the institution or institutions from which he wishes to transfer.

If the subjects satisfactorily passed cover in time and content certain of the required subjects in the engineering curriculum which he expects to enter, equivalent credit will be allowed.

All transfer students, however, must have an average grade of "C" in all courses for which credit will be given. A one year probationary period will follow entrance, during which time a "C" average must be maintained.

EXPENSES

In additon to the regular collegiate expenses listed elsewhere in this catalogue, the beginner in engineering is required to purchase a drawing outfit of a quality approved by the faculty. The cost of this outfit is approximately $25.00. All freshmen are required to purchase a slide rule. The cost of this instrument will vary from year to year but will be approximately $10.00. All students, on reaching the junior level, should have free access to, or possess, a typewriter for the purpose of preparing laboratory and other reports during their junior and senior years. This machine may be either portable or desk model. From time to time it may be deemed advisable to charge a small departmental fee for certain laboratory courses, to cover cost of materials.

CURRICULUM

The staff of the School of Engineering, believing that the average beginning student is unprepared to select intelligently the field of engineering which he is to follow, has

arrangd for a basic course during the first year. All freshman students will take this course during the first year and thus have an opportunity to learn more specifically of each branch of engineering. In the sophomore year they will then take the curriculum as indicated in the field of their choice.

CHEMICAL ENGINEERING

There is an ever-increasing demand for men well trained in chemical engineering, and today men with a thorough education in engineering, chemistry, and business occupy prominent and responsible positions in industrial organizations.

This course is designed to give the student a broad and thorough knowledge of the fundamental principles of engineering and chemistry and to develop his ability to analyze chemical engineering problems, to evaluate each factor properly, and thereby obtain an intelligent understanding of the particular problem and a practical solution thereof.

This curriculum has not been arranged to provide for a specialist in any one field, but to prepare the student in the fundamentals of chemical engineering.

CIVIL ENGINEERING

The curriculum in civil engineering has been arranged with the idea of giving the student, first, a cultural background, second, a general knowledge of related engineering fields and, finally, a thorough grounding in the strictly civil engineering subjects. As a rule, subjects of a more general nature have been introduced into the first two years of the curriculum, and have been followed by the more technical subjects in the last two years.

The lecture work has been generously supplemented by laboratory, field and drawing classes for the purpose of correlating theory with practice. The student is required to make original surveys in the field, and original designs in the laboratory work. For the most part, the civil engineering drawing classes consist of the plotting up of these surveys, and the making of detail drawings of these designs which the student himself has made.

ELECTRICAL ENGINEERING

It is the purpose of this department to offer the necessary theoretical and practical instruction to enable the graduate to enter the profession of electrical engineering and, especially, to participate successfully in the rapid industrial development of the South.

The work of the electrical engineer consists, primarily,

of the design, the construction, the selection, and the operation of electrical machinery and apparatus, as well as the generation, transmission and distribution of electrical energy. To prepare the student to meet the problems he will encounter as an engineer, the curriculum is selected to conform with recognized engineering educational standards and give a broad cultural training along with a thorough grounding in the fundamentals of electrical engineering.

MECHANICAL ENGINEERING

The aim of the Mechanical Engineering Department is to give the student a knowledge of the fundamentals of engineering with some degree of spcialization during the last two years of the four-year period required for the completion of this course. Mechanical engineering involves the problems of design, manufacture, and operation of machines, and requires of the engineer a knowledge that will enable him to solve these problems in such a way that the greatest possible economy will result.

It is intended that this course of study shall prepare the mechanical engineering student with the necessary amount of specialized knowledge in order that he may take a place in industry and by application of his fundamental training ascend to a position of social and economic usefulness.

ENGINEERING CURRICULA

BASIC FIRST YEAR ENGINEERING CURRICUIUM

This first year curriculum is required of all engineering students. The work is intended to provide an opportunity for the student to become acquainted with general fundamentals. At the completion of this year's work, the student will indicate the department in which, during the next three years, he proposes to study and earn a degree.

FRESHMAN YEAR

First Semester

	P	T	C
English 402, Freshman English		3	3
Chemistry 401, General Inorganic	3	3	4
Mathematics 401, College Algebra		3	3
Mathematics 402, Trigonometry		3	3
Engineering 401, Engineering Problems		1	1
Engineering 451, Engineering Drawing	6		2
Physical Education 401	2	1	1
	11	14	17

P—Practical courses in shop, drawing, laboratory, and field work.
T—Theoretical courses, lectures, recitations, and problems.
C—Semester hours credit.

Second Semester

English 402, Freshman English		3	3
Chemistry 402, General Inorganic	3	3	4
Mathematics 501, Plane Analytic Geometry		3	3
History or Social Science (Elective)		3	3
Engineering 452, Engineering Drawing	6		2
Civil Engineering 552, General Surveying	6		2
Physical Education 402	2	1	1
	17	13	18

Semester hours in freshman year 35
Total semester hours 35

CHEMICAL ENGINEERING CURRICULUM

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

SOPHOMORE YEAR

First Semester

	P	T	C
English 501, English Literature		3	3
Mathematics 600, Calculus I		3	3
Mechanical Engineering 501, Heat Engineering		3	3
Physics 501, General Physics	3	3	4
Engineering 610, Geology		2	2
Chemistry 605, Analytical Chemistry	6	1	3
Physical Education 501	2	1	1
	11	16	19

Second Semester

English 603, Technical English		3	3
Physics 502, General Physics	3	3	4
Mechanical Engineering 502, Heat Engineering		3	3
Chemistry 606, Analytical Chemistry	6	1	3
Mathematics 601, Calculus II		3	3
Electrical Engineering 502, Elementary Electricity	3	2	3
Physical Education 502	2	1	1
	14	16	20

Semester hours in sophomore year 39
Total semester hours 74

JUNIOR YEAR

First Semester

	P	T	C
Chemistry 601, Organic Chemistry	6	3	5
Chemistry 611, Physical Chemistry	3	3	4
Chemical Engineering 601, Industrial Stoichiometry		2	2
Civil Engineering 601, Mechanics		3	3
Mathematics 602, Calculus III		3	3
	9	14	17

Second Semester

Chemistry 602, Organic Chemistry	6	3	5
Chemistry 612, Physical Chemistry	3	3	4
Chemical Engineering 602, Chemical Technology		2	2
Civil Engineering 602, Mechanics		3	3
Civil Engineering 622, Strength of Materials		3	3
	9	14	17

Semester hours in junior year 34
Total semester hours 108

SENIOR YEAR

First Semester

	P	T	C
Chemical Engineering 701, Principles of Chem. Engineering	3	3	4
Chemistry 711, Chemical Thermodynamics		3	3
Chemical Engineering 703, Petroleum Technology	3	3	4
Electrical Engineering 614, Electrical Machinery	3	3	4
Economics 501, Introduction to Economics		3	3
	9	15	18

Second Semester

	P	T	C
Chemical Engineering 702, Principles of Chem. Engineering	3	3	4
Chemical Engineering 724, Seminar		1	1
Chemical Engineering 732, Chemical Plant Design	3	2	3
Chemical Engineering 730, Engineering Metallurgy		3	3
Engineering 731, Contracts and Specifications		2	2
Economics 502, Introduction to Economics		3	3
Chemistry 610, Technical Analysis	6		2
	12	14	18

Semester hours in senior year 36
TOTAL semester hours 144

CIVIL ENGINEERING CURRICULUM

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

SOPHOMORE YEAR

First Semester

	P	T	C
English 501, English Literature		3	3
Physics 501, General Physics	3	3	4
Mathematics 600 Calculus I		3	3
Mechanical Engineering 501, Heat Engineering		3	3
Engineering 511, Descriptive Geometry	3	2	3
Economics 501, Introduction to Economics		3	3
Physical Education 501	2	1	1
	8	18	20

Second Semester

	P	T	C
English 603, Technical English		3	3
Physics 502, General Physics	3	3	4
Mathematics 601, Calculus II		3	3
Mechanical Engineering 502, Heat Engineering		3	3
Economics 502, Introduction to Economics		3	3
Physical Education 502	2	1	1
	5	16	17

Semester hours in sophomore year 37
Total semester hours 72

JUNIOR YEAR

First Semester

	P	T	C
Electrical Engineering 502, Elementary Electricity	3	2	3
Civil Engineering 601, Mechanics		3	3
Civil Engineering 621, Hydraulics		3	3
Civil Engineering 641, Plane Surveying	4	2	3⅓
Mechanical Engineering 651, Junior Laboratory	6		2
Civil Engineering 681, Civil Engineering Drawing	4		1⅓
Mathematics 602, Calculus III		3	3
	17	13	18⅔

Second Semester

	P	T	C
Engineering 610, Geology		2	2
Civil Engineering 602, Mechanics		3	3
Electrical Engineering 614, Electrical Machinery	3	3	4
Civil Engineering 642, Railroad Surveying	4	2	3⅓
Civil Engineering 622, Strength of Materials		3	3
Civil Engineering 682, Civil Engineering Drawing	4		1⅓
	11	13	16⅔

Semester hours in junior year 35⅓
Total semester hours 107⅓

SENIOR YEAR

First Semester

	P	T	C
Engineering 722, Industrial Organization		3	3
Civil Engineering 731, Reinforced Concrete Construction		3	3
Civil Engineering 735, Higher Surveying	4	2	3⅓
Civil Engineering 741, Structural Engineering		3	3
Civil Engineering 751, Water Supply and Sewerage	3	3	4
Civil Engineering 761, Civil Engineering Drawing	4		1⅓
	11	14	17⅔

Second Semester

Engineering 731, Contracts and Specifications		2	2
Civil Engineering 721, Materials of Construction		2	2
Civil Engineering 722, Structural Laboratory	6		2
Civil Engineering 724, Seminar		1	1
Civil Engineering 732, Reinforced Concrete Buildings		2	2
Civil Engineering 742, Structural Engineering		3	3
Civil Engineering 762, Structural Design	6		2
Civil Engineering 772, Foundations		2	2
	12	12	16

Semester hours in senior year 33⅔
TOTAL semester hours 141

ELECTRICAL ENGINEERING CURRICULUM

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

SOPHOMORE YEAR

First Semester

	P	T	C
English 501, English Literature		3	3
Mathematics 600, Calculus I		3	3
Mechanical Engineering 501, Heat Engineering		3	3
Engineering 511, Descriptive Geometry	3	2	3
Physics 501, General Physics	3	3	4
Mechanical Engineering 662, Machine Shop	6		2
Physical Education 501	2	1	1
	14	15	19

Second Semester

English 603, Technical English		3	3
Mathematics 601, Calculus II		3	3
Mechanical Engineering 502, Heat Engineering		3	3
Electrical Engineering 502, Elementary Electricity	3	2	3
Physics 502, General Physics	3	3	4
Engineering 671, Photography	3		1
Physical Education 502	2	1	1
	11	15	18

Semester hours in sophomore year 37
Total semester hours 72

JUNIOR YEAR

First Semester

	P	T	C
Economics 501, Introduction to Economics		3	3
Mathematics 602, Calculus III		3	3
Civil Engineeirng 601, Mechanics		3	3
Civil Engineering 621, Hydraulics		3	3
Electrical Engineering 611, D.C. Circuits and Mechines	6	3	5
	6	15	17

Second Semester

Mathematics 706, Differential Equations		3	3
Economics 502, Introduction to Economics		3	3
Civil Engineering 602, Mechanics		3	3
Civil Engineering 622, Strength Materials		3	3
Electrical Engineering 612, Alternating Circuits	3	3	4
Mechanical Engineering 651, Junior Laboratory	6		2
	9	15	18

Semester hours in junior year 35
Total semester hours 107

SENIOR YEAR

First Semester

	P	T	C	
Electrical Engineering 615, Electronics & Communication	3	3	4	
Mechanical Engineering 701, Kinematics & Kinetics		3	3	
Mechanical Engineering 711, Power Plant Engineering		3	3	
Electrical Engineering 716, Illumination	3	2	3	
Electrical Engineering 725, Electrical Equipment		3	3	
Electrical Engineering 730, Communication or	0	3	3	or
Electrical Engineering 754, Power plant Operation	6		2	
	6	17	19	or
	12	14	18	

Second Semester

Engineering 722, Industrial Organization		3	3
Electrical Engineering 712, Power Plant Design	3	2	3
Electrical Engineering 724, Seminar		1	1
Electrical Engineering 726, Electrical Transmission		3	3
Electrical Engineering 702, Electrical Machine Design	3	2	3
Electrical Engineering 751, A.C. Machine Laboratory	6		2
Electrical Engineering 728, Electrical Equipment		3	3
	12	14	18

Semester hours in senior year ..... 36 or 37
TOTAL semester hours ..... 143 or 144

MECHANICAL ENGINEERING CURRICULUM

(LEADING TO THE DEGREE OF BACHELOR OF SCIENCE)

SOPHOMORE YEAR

First Semester

	P	T	C
Electrical Engineering 502, Elementary Electricity	3	2	3
English 501, English Literature		3	3
Physics 501, General Physics	3	3	4
Mathematics 600, Calculus I		3	3
Mechanical Engineering 501, Heat Engineering		3	3
Economics 501, Introduction to Economics		3	3
Physical Education	2	1	1
	8	18	20

Second Semester

Engineering 511, Descriptive Geometry	3	2	3
Economics 502, Introduction to Economics		3	3
English 603, Technical English		3	3
Physics 502, General Physics	3	3	4
Mathematics 601, Calculus II		3	3
Mechanical Engineering 502, Heat Engineering		3	3
Physical Education	2	1	1
	8	18	20

Semester hours in sophomore year 40
Total semester hours 75

JUNIOR YEAR

First Semester

	P	T	C
Mathematics 602, Calculus III		3	3
Civil Engineering 601, Mechanics		3	3
Civil Engineering 621, Hydraulics		3	3
Mechanical Engineering 641, Internal Combustion Engines		3	3
Mechanical Engineering 651, Mechanical Laboratory	6		2
Mechanical Engineering 662, Machine Shop	6		2
Engineering 671, Photography	3		1
	15	12	17

Second Semester

Civil Engineering 602, Mechanics		3	3
Civil Engineering 622, Strength of Materials		3	3
Electrical Engineering 611, D.C. Circuits & Machines	6	3	5
Electrical Engineering 614, Electrical Machinery	3	3	4
Mechanical Engineering 715, Thermodynamics		3	3
	19	15	18

Semester hours in junior year 35
Total semester hours 110

SENIOR YEAR

First Semester

	P	T	C
Mechanical Engineering 701, Kinematics and Kinetics		3	3
Mechanical Engineering 702, Machine Design	3	2	3
Mechanical Engineering 711, Power Plant		3	3
Mechanical Engineering 741, Heating, Ventilating & Air C.		3	3
Mechanical Engineering 751, Senior Mechanical Laboratory	6		2
Mechanical Engineering 725, Steam Turbines		3	3
	9	14	17

Second Semester

Engineering 722, Industrial Organization		3	3
Engineering 731, Contracts & Specifications		2	2
Mechanical Engineering 703, Machine Design	3	2	3
Mechanical Engineering 712, Power Plant Design	3	2	3
Mechanical Engineering 724, Seminar		1	1
Mechanical Engineering 752, Mechanical Laboratory	6		2
Mechanical Engineering 716, Refrigeration		3	3
Mechanical Engineering 780, Welding and Heat Treating	3		1
	15	13	18

Semester hours in senior year 35
TOTAL semester hours 145

DESCRIPTION OF COURSES

GENERAL ENGINEERING

STAFF

ENGINEERING 401: *Engineering Problems.* One hour.

Fundamentals of the Slide Rule. Computation forms and methods. Training in recording engineering computations in a clear and systematic manner. Practical applications of Algebra, Arithmetic, Geometry, and Trigonometry to problems in engineering.

ENGINEERING 451: *Engineering Drawing.* Two hours.

Practice in the correct use of drawing instruments, T square, triangles, and scales. Construction of geometric figures. Freehand letering, titles. Principles of orthographic projection. Detailing and dimensioning of elementary machine parts. Problems in rotation of solids. Development of surface and intersections of solids. Isometric projection. Construction and detailing of common fasteners.

ENGINEERING 452: *Engineering Drawing,* concluded. Two hours. Prerequisite, Engineering 451.

Section drawing. Reading, drawing and interpreting of machine details and assemblies. Freehand sketching of machine elements. Original mechanical drawings machine parts. Patent office drawings. Tracing and blueprinting.

ENGINEERING 511: *Descriptive Geometry.* Three hours. Prerequisite, Engineering 452.

A study of the relative direction of lines and planes. True shapes and sizes of portions of planes, and similiar problems. Training in development of clear and logical reasoning ability, stressing the quality of vision. Simple and higher relations of the point, the line, and the plane. Intersections of lines, planes, and curved surfaces. Shades and shadows.

ENGINEERING 610: *General Geology for Engineers.* Two hours. Open to sophomores, juniors and seniors. Prerequisite Chemistry 402.

An introduction to the principles of geology and a study of the physical nature of the earth.

ENGINEERING 671: *Photography.* One hour. Open to juniors.

Lenses. Effects of light upon different chemicals. Cameras. Practice in exposing, developing, printing and other operations necessary to make pictures. Copying, enlarging, and redeveloping.

ENGINEERING 722: *Industrial Organization.* Three hours. Open to seniors.

Principles of industrial organization and management, including industrial finance, wage systems, factory organization and location, and the planning of factory buildings. Industrial tendencies, organized labor, factory legislation, personnel service, activities, introduction to business activities, financial calculations and depreciation problems. Budgeting and cost accounting systems.

ENGINEERING 731: *Contracts and Specifications.* Two hours.

Essential elements of a legal contract, competency of agents, corporations, etc. Engineering specifications, instructions to bidders, forms of proposals, etc.

Department of Chemical Engineering

W. W. CHEW, ASSOCIATE PROFESSOR AND HEAD OF THE DEPARTMENT

DESCRIPTION OF COURSES

CHEMICAL ENGINEERING 601: *Industrial Stoichiometry.* Two hours. Prerequisite, Chemistry 606.

Problems and recitation in material and heat balances involved in chemical processes.

CHEMICAL ENGINEERING 602: *Chemical Technology.* Two hours. Prerequisite, Ch. E. 601.

A study of the application of chemistry to manufacturing in the most important chemical industries such as acids, alkalis, cement, glass, paints, paper and organic chemicals.

CHEMICAL ENGINEERING 701, 702: *Principles of Chemical Engineering.* Four hours per semester. Three laboratory, three lectures. Prerequisites, Ch. E. 601, 602.

Lectures, recitation and problems, devoted to the study of basic laws involved in the dynamics of fluids, flow of heat, radiation, evaporation, drying, distillation, crushing, grinding, sendimentation, and filtration, with laboratory application of these principles to industrial practice.

CHEMICAL ENGINEERING 703: *Petroleum Technology.* Four hours. Three laboratory. Three lecture. Prerequisite, Chemistry 602.

A detailed study of the important chemical and physical properties of petroleum and its products. Special attention is given to the chemical aspects of refining of petroleum products. Study of the standard petroleum testing methods with emphasis on interpretation of results and report writing.

CHEMICAL ENGINEERING 724: *Seminar.* One hour. Open to seniors.

Opportunity is offered for technical discussion, reading of assigned papers and informal talks by instructors and professional engineers. Seminar further serves to bring the student abreast of current engineering thought.

CHEMICAL ENGINEERING 730: *Engineering Metallurgy.* Three hours. Prerequisite, Chemistry 611.

A study of the important ferrous and non-ferrous metals and alloys as they relate to the engineer. Production methods are covered as well as properties of metals. The principles of metallography are treated to show the relationship of structure and heat treatment to properties and uses.

CHEMICAL ENGINEERING 732: *Plant Design.* Three hours. Three laboratory. Two lecture. Prerequisite, Ch. E. 701.

Design of chemical plant construction and arrangement of machinery and equipment.

Department of Civil Engineering

R. A. McFARLAND, PROFESSOR AND HEAD OF THE DEPARTMENT
PROFESSOR ROY T. SESSUMS; ASSOCIATE PROFESSORS J. T. FOLK, C. T. WATTS;
ASSISTANT PROFESSOR F. E. HOGAN

DESCRIPTION OF COURSES

CIVIL ENGINEERING 552: *General Surveying.* Two hours. Prerequisite, Mathematics 401-402.

The principles and fundamental operations of surveying with compass, level, and transit. Field practice is given in actual surveys of land. Computations of area and drawing of plans; differential and profile leveling, running contours, etc.

CIVIL ENGINEERING 601: *Mechanics.* Three hours. Prerequisite, Physics 501, credit or registration in Mathematics 601.

Applied and analytical mechanics. The statistical analysis of concurrent, non-concurrent, coplanar, and non-coplanar forces. Practical applications of statics to determination of stresses in engineering structures. Static and kinetic friction with application to belts, axles, jacks, etc. Centroids and centers of gravity. Moment of inertia.

CIVIL ENGINEERING 602: *Mechanics,* concluded. Three hours. Prerequisite, Engineering 601.

Mass moment of inertia. Kinetmatics and kinetics of rectillinear, rotational, and combined motion. Work and power. Principles of impluse and momentum.

CIVIL ENGINEERING 621: *Hydraulics.* Three hours. Prerequisite, Mathematics 601.

Hydrostatics and hydrodynamics. Hydrostatic pressures as viewed in balancing columns of the same or different liquids, and in pressures on submerged surfaces. Elementary theory of gravity dam stability. Logarithmic plotting of hydraulic testa data. Energy and velocity relation in the flow of water. Converging and diverging flows. Pipe and canal flow. Solution of looping and branching hydraulic distribution systems. Hydraulic machinery in theory, construction and operation. Centrifugal water pumps, impluse and reaction turbines. Water hammer and surging.

CIVIL ENGINEERING 622: *Strength of Materials.* Three hours. Prerequisites, Civil Engineering 601 and credit or registration in Mathematics 601.

The resistance and properties of engineering materials, including the theory and practice of design of simple tension, compression, and shear members; riveted joints; simple, overhanging, and cantilever beams. Shear distribution in beams; beam deflections; continuous and statically indeterminate beams. Column theory and design.

CIVIL ENGINEERING 641: *Plane Surveying.* Three and one-third hours. Prerequisite, Civil Engineering 552.

Measurements of lines, angles, and differences of elevation; adjustments of surveying instruments; miscellaneous surveying problems; plane table surveys; stadia method; city, topographical, and mining surveying.

CIVIL ENGINEERING 642: *Railroad Surveying and Earthwork.* Three and one-third hours. Prerequisite, C. Engineering 641.

Reconnaissance, preliminary, and location surveys. Railroad and highway simple curves by deflections, tangent offset, chord produced, and other methods. Obstacles to curve locations. Reversed, compound and spiral curves; turn-outs. crossing, and connections, earthwork diagrams and computations; vertical curves.

CIVIL ENGINEERING 681: *Civil Engineering Drawing.* One and one-third hours. Prerequisite, credit or registration in Civil Engineering 641.

Free-hand letering, titles, topographical conventions; realignment location and contour problems; maps, plans and profiles.

CIVIL ENGINEERING 682: *Civil Engineering Drawing,* concluded. One and one-third hours. Prerequisite, credit or registration in Civil Engineering 642.

A complete topographical map of some area of large extent is made from original field notes. Simple, reversed, compound, and spiral curve problems.

CIVIL ENGINEERING 721: *Materials of Construction.* Two hours. Open to seniors.

The principles of construction underlying the laws of the strength of materials of construction. Manufacture and general properties of materials. Testing machines and methods of testing materials of construction. Concrete yield problems.

CIVIL ENGINEERING 722: *Structural Laboratory.* Two hours. Prerequisite, Civil Engineering 741 and credit or registration in Civil Engineering 742.

Theoretical and experimental analysis of structural members, and models, and determination of physical properties of structural materials.

CIVIL ENGINEERING 724: *Seminar.* One hour. Second semester. Open to seniors.

Opportunity is offered for technical discussion, reading of assigned papers, informal talks by instructors and professional engineers, debates on matters of technical interest. Instruction in oral delivery. Seminar further serves to bring the student abreast of current engineering thought.

CIVIL ENGINEERING 731: *Reinforced Concrete Construction.* Three hours. Prerequisite, Civil Engineering 622.

Concrete and steel in combination. Principles underlying the design of integral parts of reinforced concrete structures such as beams, girders, slabs, columns, footings, walls, etc. Retaining walls. long columns, fiat slabs.

CIVIL ENGINEERING 732: *Reinforced Concrete Buildings.* Two hours. Prerequisite, Civil Engineering 731.

The calculation of stresses resulting in complete structures of reinforced concrete, accompanied by class room designs. Simple applications of slope deflections and moment distributions.

CIVIL ENGINEERING 735: *Higher Surveying.* Three and one-third hours. Prerequisite, Civil Engineering 642.

Triangulation, measurements and corrections for base lines, astronomical surveying, precise leveling, higher surveying problems and computations.

CIVIL ENGINEERING 741: *Structural Engineering.* Three hours. Prerequisite, Civil Engineering 601 and 622.

Lectures and drawing work in the analysis of engineering structures, with emphasis on the graphical method. Conditions for maximum and minimum loading of beams, bridges, roofs, and buildings. Computation of stresses in beams. Drawing of stress sheets of common styles of roof and bridge trusses. Introduction to structural design for shear, bending, and axial stresses. Structural connections.

CIVIL ENGINEERING 742: *Structural Engineering,* concluded. Three hours. Prerequisite, Civil Engineering 741.

Analysis of economic sections, best rivet spacing for plate girders. Beam and girder bridges. Stress analysis and design of members for truss type railroad and highway bridges. Mill type buildings. Lectures accompanied by problems in selection of structural members and the design of structural connections.

CIVIL ENGINEERING 751: *Water Supply and Sewerage.* Four hours. Prerequisite, Civil Engineering 621 and 622.

Sources of water supply, and sanitary problems associated with location, construction, and operation of water supplies, purification works, and distribution systems. Sewerage collection, treatment, and disposal works.

CIVIL ENGINEERING 761: *Advanced Civil Engineering Drawings.* One and one-third hours. Prerequisite, Civil Engineering 642.

Preliminary railroad and highway maps from original notes; paper locations; complete plans and profile maps; tracing and blueprinting.

CIVIL ENGINEERING 762: *Advanced Civil Engineering Drawing,* concluded. Two hours. Prerequisite, Civil Engineering 741 and registration in Civil Engineering 742.

The practical application of structural engineering to structural steel design and drafting. Detailed calculations for a complete steel structure, e.g. a bridge, roof, or building. General and detail drawings, bill of material, and estimate of weight. Course 742 and 762 are cordinated so that the theory guides the practice.

CIVIL ENGINEERING 772: *Foundations.* Two hours. Prerequisite, Civil Engineering 731.

Design and construction of footings, cofferdams, and caisons for bridges and buildings. Piers and abutments. Underpinning of buildings. Exploration and testing of foundation sites. Excavation and removal of materials from foundation sites.

Department of Electrical Engineering

H. J. NETHKEN, PROFESSOR AND HEAD OF THE DEPARTMENT
ASSOCIATE PROFESSOR R. S. WYNN, ASSISTANT PROFESSOR ALFRED AMEEN

DESCRIPTION OF COURSES

ELECTRICAL ENGINEERING 502: *Elementary Electricity.* Three hours.

Study of electrical and magnetic units. Permanent and electromagnets. Primary and secondary batteries. Elementary electrical circuits. Electrical work, heat and power .

ELECTRICAL ENGINEERING 611: *Direct Current Circuits and Machines.* Five hours. Prerequisite, Electrical Engineering 402.

General principles of construction and operation of D. C. generators and motors. Armature reaction and commutation. Voltage regulation, speed regulation, efficiency. Systems of motor control. Booster systems. D. C. Wiring and distribution systems. Armature winding problems and characteristic curves.

ELECTRICAL ENGINEERING 612: *Alternating Circuits.* Four hours. Prerequisite, Mathematics 601.

Electric fields and the nergy stored in them. Alternating voltages and currents; instantaneous, maximum, average, and effective values. Study of vectors; rectangular and polar cordinates, and complex quantities. Alternating reactions; inductance, capacitance, reactance, impedence, phase angles. Solution of series and parallel circuits. Power of single and polyphase systems. Wattmeter connections. Hysteresis and eddy current losses. Alternating current instruments. Problems.

ELECTRICAL ENGINEERING 614: *Electrical Machinery.* Four hours. Prerequisite, Electrical Engineering 402.

This course is open to non-electrical engineering students only.

A study of direct and alternating current machines and circuits; circuits in series and in parallel, generators, motors, transformers and rectifiers. Study of regulation, efficiency, and power, with special emphasis on working characteristics of machines and aparatus.

ELECTRICAL ENGINEERING 615: *Electronics and Communication.* Four hours. Prerequisite, Electrical Engineering 612.

Study of electronic phenomena; vacuum tubes. gaseous tubes, mercury arc and specialized electtron tubes; application of electronic tubes to power transformation circuits, electronic industrial control and measurement circuits.

ELECTRICAL ENGINEERING 702: *Electrical Machine Design.* Three hours. Prerequisite, Electrical Engineering 725; and registration in E. E. 728.

Study of important elements of electrical design; magnetic circuits, coils, armature windings, bearings and other machine details. Lectures and problems, including design and detailed drawings of an assigned machine.

ELECTRICAL ENGINEERING 712: *Power Plant Design.* Three hours. Prereqsisite, Mechanical Engineering 711, Electrical Engineering 725 and registration in E. E. 728.

Study and selection of equipment for a power plant; generators, exciters, and auxiliary motors. Designs of station circuits. Selection of conductors, switching equipment and instruments. Lectures with problems.

ELECTRICAL ENGINEERING 716: *Illumination.* Three hours.

Basic theory of lighting. Requirements for good lighting. Production of light. Lighting systems. Design and calculations. Industrial lighting. Residence and school lighting. Decorative lighting. Lecture and problems.

ELECTRICAL ENGINEERING 724: *Seminar.* One hour. Open to seniors.

Opportunity is offered for technical discussion, readiig of assigned papers, informal talks by instructors and professional engineers, debates on matters of technical interest. Instruction in oral delivery. Seminar futher serves to bring the student abreast of current engineering thought.

ELECTRICAL ENGINEERING 725: *Electrical Equipment.* Three hours. Prerequisite, E. E. 612.

Study of transformers; constant potential, constant current, instrument, and auto-transformers. Vector and circle diagrams, equivalent circuits, regulation, losses, efficiency and rating. Alternators; wave forms, generated voltage, armature reaction, reactance and resistance. Losses, efficiency, regulation, rating and parallel operation. Polyphase induction motors; rotating fields, equivalent circuits, circle diagram, torque, slip, power, regulation and efficiency. Cage rotors, wound rotors and speed control types.

ELECTRICAL ENGINEERING 726: *Electrical Transmission.* Three hours. Prerequisite, Electrical Engineering 725.

A study of dialectic circuits, insulation, condensers, charging currents, losses, diaelectric strength, voltage gradient, insulators and bushings, corona, spark-over, energy. Short transmission lines; resistance, inductance, capacity, graphical methods, regulation and efficiency, phase control. Commercial wave forms, Fourier's series, distorted waves, constant and pulsating resistance, inductance, and capacitance, analysis of wave forms. Protective appliance; circuit breakers, ground wires, lightning arresters, power limiting reactances, light cells. Long transmission lines; general equations, hyperbolic functions, preliminary calculations, regulation, and efficiency.

ELECTRICAL ENGINEERING 728: *Electrical Equipment.* Three hours. Prerequisite, E. E. 725.

Synchronous Motors; operational characteristics, methods of starting, power factor, phase characteristics, vector diagrams, test data. Single Phase Motors; induction, repulsion, and series motors. Torque, speed and control characteristics. Mechanical conversion devices; synchronous converter, voltage and current relations, heating of coils, power factor, rating, and efficiency. Inverters, racing, boosters. Electronic conversion devices; mercury arc, high vacuum and gas filled tubes, dry plate rectifiers. Characteristics and applications. Alternating current instruments; fundamental types, methods of damping. Ammeters, voltmeters, wattmeters, frequency meters.

ELECTRICAL ENGINEERING 730: *Communications.* Three hours. Prerequisites, Electrical Engineering 612 and Mathematics 602.

Study of the principles of electrical communication; telephone and telegraph systems and apparatus; transmission theory; networks and filters.

ELECTRICAL ENGINEERING 751: *Alternating Current Laboratory.* Two hours. Prerequisites, Electrical Engineering 725 and registration in Electrical Engineering 728.

ELECTRICAL ENGINEERING 754: *Power Plant Operation.* Two hours. Prerequisites, M. E. 711, E. E. 725 and registration in E. E. 728.

Each student taking this course will be required to spend six hours per week working in the college power plant under the direct supervision of the engineer in charge. Notebooks of operational problems will be kept and regular quize meetings will be held. At the end of the semester a comprehensive examination in operation and record keeping will be given.

Department of Mechanical Engineering

W. L. MITCHELL PROFESSOR AND HEAD OF THE DEPARTMENT
ASSOCIATE PROFESSORS, J. H. BARNWELL, BEN T. BOGARD; ASSISTANT PROFESSORS, H. B. BATCHELOR, A. N. BAXTER, H. L. HENRY, JR.

DESCRIPTION OF COURSES

MECHANICAL ENGINEERING 501: *Heat Engineering.* Three hours. Open to sophomores. Prerequisite, Chemistry 402.

A study of fuels and their combustion; furnaces and stokers. Equipment and practice in firing of oil, gas and pulverized coal. Elementary heat and work with introduction to the content and use of steam tables. Steam boiler types and details. Steam plant auxiliaries. Elementary thermodynamics of the permanent gases and steam. Steam and gas cycles in theory, with especial attention to the Otto, Diesel and Rakin cycles. Lectures accompanied by weekly exercises and problems.

MECHANICAL ENGINEERING 502: *Heat Engineering,* concluded. Three hours. Prerequisite, M. Engineering 501.

Steam cycles in practice. Steam engines, valve gear, governors. Calculation of power, valve setting, and efficiency at varying loads. Study of steam turbine types and mechanical construction. Theory of impulse and reaction nozzles and blading, with and without consideration of friction. Study of the Mollier diagram for steam. The Otto and Diesel cycles in practice. Gas, gasoline, and heavy oil engine types, rating, and performance. Ignition, carburetion, and fuel injection. Two and four-cycle types. Calculations involving volumetric and thermal efficiency, power, and part-load operation. Mechanical details of internal combustion engines for automotive, aeronautical, and stationary use.

MECHANICAL ENGINEERING 641: *Internal Combustion Engines.* Three hours. Prerequisite, M. Engineering 502.

The design nd principles of operation of internal combustion engines. The Otto and Diesel cycles and fundamental thermo-rynamic laws involved. Flywheels, governors, carburetors, cylinders, cooling, etc. Stationary and mobile engines.

MECHANICAL ENGINEERING 651: *Junior Mechanical Laboratory.* Two hours. Prerequisites, M. Engineering 502, and credit or registration in C. Engineering 621.

Calibration of steam guages and thermometers. Tests of Portland cement; cement mortar in tension and compression, concrete in compression. Tests of brick; compression, transverse, and absorption. Strength of beams and columns. Materials in tension, compression, and shear. Detemination of the modulus of elasticity. Setting of engine valves. Gas engine adjustments and operation. Gas and steam engine operation and power from indicator diagrams. Brake tests. Centrifugal and reciprocating pump tests. Fiction of water flow in pipes. Calibration of orifices, wires, and meters.

MECHANICAL ENGINEERING 662: *Machine Shop Practice.* Two hours. Open to juniors.

A study of the fundamentals of machine shop work including practice on the engine lathe in straight turning on centers, external and internal

chuck work, external and internal taper turning, drilling, reaming, and tapping in the lathe. The operation of the automatic lathe, the centerless grinder, and other types of automatic equipment. The use of the planer and shaper. Milling of place surfaces, spur, helical, and bevel gears. Design of cutting tools and practice in tool grinding. The operation of the precision grinder, the surface grinder, and the belt type grinder. The above subjects are covered through the media of lecture demonstrations and assigned machine shop projects of a practical and useful nature.

MECHANICAL ENGINEERING 701: *Engineering Kinematics.* Three hours. Prerequisite, Civil Engineering 602, 622.

A study of the mechanics of the machinery. Kinematic analysis of various linkages, cams, gears, and flexable connectors. Analysis of velocities and accelerations by centros and vector polygons. Special graphical methods are developed for the determination of accelerations in the slider crank mechanism.

MECHANICAL ENGINEERING 702: *Machine Design.* Three hours. Prerequisite, credit or registration in Mechanical Engineering 701.

Materials of machine construction. Special attention is given to the selection and heat treatment of alloy steels. Through the media of technical journals and library assignments the student is required to keep up with the current developments in the fields of light alloys and plastics.

Stress analysis, fatigue, and stress concentrations. Demonstration of stress concentration by photoelastic method. Endurance strength of various alloys by laboratory methods. Maximum stress theories. Factors of safety for machine parts subjected to variable loading. Shaft design for combined stresses. Use of funicular and force polygons. Design of tank and boiler joints. Screws, pins, keys, and other fastenings. Applications of welded fabrication in machine construction.

MECHANICAL ENGINEERING 703: *Machine Design.* Three hours. Prerequisites, Mechanical Engineering 701, 702.

A continuation of Mechanical Engineering 702. Design of power transmission machinery, belts, chains, gears, clutches, and brakes. Ball, roller, babbitt, and other types of bearings. Practice in the use of manufacturer's data and engineering handbooks. Complete design and detailing of some assigned machine.

MECHANICAL ENGINEERING 711: *Power Plan Engineering.* Three hours. Prerequisites, M. Engineering 502, C. E. 621.

Theory and practice of the modern stationary power plant, with especial attention to economic selection and layout. Variable load and the cost of power service. Rates. The power plant building. Diesel plant design. Steam flow, dams, mass curves, and flow line of the hydro-electric plant. Hydro station equipment and performance. The principal vapor cycles in theory and practice. Cycle design and heat balance computations for Rankine, regenerative, reheating, and binary vapor cycles. Study of modern heat transfer theories. Selection of steam boilers, water walls, and superheaters.

MECHANICAL ENGINEERING 712: *Power Plant Engineering,* concluded. Three hours. Prerequisite, M. Engineering 711.

Selection of equipment and design of the steam-electric plant. Steam engines. Advanced theor yo fthe steam turbine. Prediction of turbine

operating conditions at full and part loads. Condensers and condenser auxiliaries. The interrelation of boiler turbine and condenser. Selection of equipment relating to the combustion of fuel; conveyors, strokers, burners, fans, etc. Feedwater treatment. Heating and evaporation of feedwater. Piping problems. Systems of piping. Electric system equipment and layout. Generators, switches, control, and protective devices. Design of station circuits and selection of conductors. Supply of energy to auxiliaries. Power plant instruments.

MECHANICAL ENGINEERING 715: *Thermodynamics.* Three hours. Prerequisite, M. Engineering 502.

A study of conditions surrounding the doing of work, with and without consideration of heat changes, and the transformation of heat into work in the steam engine, internal combustion engine, refrigerating machinery, compressors, etc.

MECHANICAL ENGINEERING 716: *Refrigeration.* Three hours. Prerequisite, M. Engineering 715.

The thermodynamics of refrigeration and refrigeration cycles. Design, construction, and operation of refrigerating plants.

MECHANICAL ENGINEERING 724: *Seminar. One* hour. Open to seniors.

Opportunity is offered for technical discussion, reading of assigned papers, informal talks by instructors and professional engineers, debates on matters of technical interest. Instruction in oral delivery. Seminar further serves to bring the student abreast of current engineering thought.

MECHANICAL ENGINEERING 725: *Steam Turbines.* Three hours. Prerequisite, Mechanical Engineering 502.

A study of the theoy of the steam turbine, its construction, application and operation, with special attention to the designing of nozzles and blades.

MECHANICAL ENGINEERING 741: *Heating, Ventilating and Air Conditioning.* Three hours. Prerequisite, Mechanical Engineering 502.

Direct and indirect systems of heating with live steam, exhaust steam, air and water. Laying out plants. Ventilating and its relation to heating. A complete design of a heating and ventilating plant is required.

MECHANICAL ENGINEERING 751: *Senior Mechanical Laboratory.* Two hours. Prerequisite, Engineering 651.

Tests of lubricating oils; viscosity; emulsibility, flash, and burning points. Heat value of gas and coal. Proximate analysis of coal. Flue and exhaust gas analysis. Transfer of heat through pipes and tubes. Horsepower and mechanical efficiency of steam engines. Power and efficiency of air compressors. Thermal-mechanical efficiency of gas engine, steam engines, and steam turbine. Evaporative tests on steam boiler.

MECHANICAL ENGINEERING 752: *Mechanical Laboratory.* A continuation of Mechanical Engineering 751. Two hours. Prerequisite, Mechanical Engineering 751.

Operation of steam equipment and internal combustion engines. Power and efficiency tests. Heating and ventilating equipment tests. Fuel and lubrication testing.

MECHANICAL ENGINEERING 780: *Welding and Heat Treating.* One hour. Open to seniors.

Theory of electric and oxy-acetylene welding and cutting. Practice in the operation of manual and machine cutting torches, single operator arc welders, progressive spot welders, and flash welders. Hardening, tempering, and annealing of steels. Use of gas and electric heat treating furnaces. Molten salts and metals for heating and quenching. Induction heating. Hardness testing.

FLIGHT INSTRUCTION

Instruction, (Flight and Ground) to be given by Stuckey Flying Service, a Civil Aeronautics Administration approved flying school.

These courses of instruction are under the general administration of the Dean, School of Engineering.

PRIMARY FLYING COURSE: *Flight and Ground Instruction.* (40 hrs. Flight Instruction; 30 hrs. Ground Instruction) Six semester hours credit.

PRIMARY FLYING COURSE
Leading to a CAA Private License

Course	Flight Hours Dual	Flight Hours Solo	[1]Fee
*Primary	17	23	$354.00
*Ground School	Hours		
Navigation	10		
Meterology	10		
C. A. R.	5		
Gen. Ser. of A-C	5		21.00
Total	30		
Total Cost			$375.00

COMMERCIAL FLYING COURSE: *Flight and Ground Instruction.* (130 hrs. Flight Instruction; 75 hrs. Ground Instruction) Fifteen semester hours credit. Prerequisite: Primary Flying Course and-or Private Pilot License.

COMMERCIAL FLYING COURSE
Leading to a CAA Commercial License

Course	Flight Hours Dual	Flight Hours Solo	[1]Fee
*Flight			
145 HP or more	5	10	$225.00
65-125 HP	36	79	992.00
*Ground School	Hours		
C. A. R.	5		
Meterology	10		
Navigation	10		
Radio	10		
A-C Engines	20		
Aircraft	20		52.50
	75		$1269.50

FLIGHT INSTRUCTOR COURSE: *Flight and Ground Instruction.* (40 hours Flight Instruction; 40 hours Ground Instruction) Six semester hours credit. Prerequisite: Commercial Flying Course and-or Commercial Pilot License.

FLIGHT INSTRUCTOR COURSE

Leading to a CAA Flight Instructor's License

Course	Flight Hours Dual	Flight Hours Solo	[1]Fee
*Flight Fl. Instruction 62-125 HP	30	10	$380.00
*Ground School Ground Instruction	40 Hours		28.00
			$408.00

[1]These fees are charged veterans and non-veterans alike.

*Students will be required to register for bother flight and ground school.

In the event a student drops a flight course, fees will be prorated on a basis of the actual number of dual, solo, and ground school hours completed. The following hourly rates will apply in such cases:

	Dual	Solo
Aircraft, 65-125 HP	$10.00	$ 8.00
Aircraft, 145 HP or more	17.00	14.00
Ground School	$.70 per hour	

SCHOOL OF HOME ECONOMICS

ALICE MILLETT GRAHAM, Dean

PROFESSOR ALICE MILLETT GRAHAM; ASSOCIATE PROFESSOR MERLE BURK; ASSISTANT PROFESSORS AGNES CHAMBLESS, WILLIE FLETCHER, RUTH RICHARDSON; INSTRUCTOR BESSIE JOYCE; PART TIME INSTRUCTOR IRENE TOLLIVER

PURPOSE

The purpose of the School of Home Economics is to give special training in home-making along with basic academic work. Students who major in home economics find positions in many fields.

The demand for teachers has been especially great. Those who take the teacher-training course may also obtain positions as home demonstration agents after successful teaching experience.

Training is offered in institutional management to prepare students for either commercial work or dietetic internships.

Other fields for which training is offered are those of commercial work in home economics, clothing art, and nursery school supervision. Students in other schools may elect home economics as a minor.

The work of the School is divided into five areas:

(1) Foods and nutrition.
(2) Textiles, clothing and related arts.
(3) Child care and home management.
(4) Home economics education.
(5) Institutional management.

BUILDINGS

Three buildings are devoted entirely to the teaching of home economics. The main building contains the laboratories for foods, nutrition, textiles and clothing courses. The Nursery School is used as a laboratory for child development. The Home Management House was designed to give the senior girls practical experience in all phases of home management.

ADMISSION

The Home Economics curricula are open to any high school graduate. No credits in high school home economics are required.

CURRICULA

Three curricula are open to Home Economics majors:

1. The general curriculum which leads to the Bachelor of Arts degree. This includes:
   (a) The Home makers course
   (b) The Clothing-Art course
   (c) The Child Development course
   (d) The Commercial course
2. The teacher-training curriculum which leads to the Bachelor of Science degree. Upon completion of this curriculum the student may obtain a certificate to teach in vocational or non-vocational high schools in Louisiana.
3. The institutional management curriculum which leads to the Bachelor of Science degree.

The general curriculum is designed for those who wish to take their major work in Home Economics without becoming highly specialized in the field. This curriculum should be chosen by those who are interested in home making, clothing art, child development and commercial work. The first two years work is the same for all students who follow the general curriculum.

The teacher-training curriculum trains for teaching and home demonstration work.

The institutional management curriculum is planned for the students who are interested in large quantity feeding and for those who expect to serve a dietetic internship.

GENERAL CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402: Freshman Composition	6	
Zoology 401, Botany 403	7	
*Mathematics 405	3	
Art 401, 475: Art Structure	4	
Home Economics 401: Textiles	3	
Home Economics 402: Clothing	3	
Speech 410	3	
Freshman Orientation	1	
Physical Education: any two from 412-417	2	
Total semester hours		32

SOPHOMORE YEAR	Semester Hours	
English 501, 502: English and American Literature	6	
Chemistry 407, 408: General Chemistry	8	
Home Economics 405, 406	6	
**Home Economics 514: Family Clothing	3	
Foreign Language	6	
Physical Education	2	
Total semester hours		31

*Commercial majors take Mathematics 419 instead of 405. These majors are advised to take Mathematics 420 as an elective.
**Child development majors take Psychology 501 instead of this course.

CHILD DEVELOPMENT MAJORS

JUNIOR YEAR	Semester Hours	
Economics 505	3	
Sociology 505	3	
Home Economics 505: Dietetics	3	
Home Economics 614: Child Development	3	
Home Economics 514: Family Clothing	3	
Home Economics 618: Home Furnishing	3	
Home Economics 650: Home Management	1	
Psycology 504	3	
Foreign Language	6	
Speech 620	3	
Total semester hours		31

SENIOR YEAR	Semester Hours	
Home Economics 615: Nursery School Administration	3	
Home Economics 616: Nursery School Participation	3	
Home Economics 750: Home Management	4	
History (as advised)	3	
Music 630	2	
Electives	17	
Total semester hours		32
TOTAL semester hours in curriculum		126

CLOTHING-ART MAJORS

JUNIOR YEAR	Semester Hours	
Sociology 505	3	
Home Economics 505: Dietetics	3	
Home Economics 614: Child Development	3	
Home Economics 618: Home Furnishing	3	
Home Economics 650: Home Management	1	
Psycology 501	3	
Home Eooncmics 610: Advanced Clothing	3	
Art 450, 451	4	
History (as advised)	3	
Foreign language	6	
Total semester hours		32

SENIOR YEAR	Semester Hours	
Art electives	4	
Economics 505	3	
Electives	15	
Home Economics 710: Dress Design and Pattern Construction	3	
Home Economics 750: Home Management Residence	4	
Music 630: Music Appreciation	2	
History or Political Science	3	
Total semester hours		34
TOTAL semester hours in curriculum		129

COMMERCIAL MAJORS

(IN HOME ECONOMICS)

JUNIOR YEAR	Semester Hours	
Economics 505	3	
Sociology 505	3	
Home Economics 505: Dietetics	3	
Psychology 501	3	
Home Economics 650: Home Management	1	
Foreign language	6	
Speech: 612 or 511	3	
Physics	6	
Commerce 501, or 502—(If student is proficient in typing an elective may be substituted)	2	
Total semester hours		30

SENIOR YEAR	Semester Hours	
Home Economics 614: Child Development	3	
Home Economics 750: Home Management Residence	4	
History or Political Science	3	
Home Economics elective	6	
Electives	17	
Total semester hours		33
TOTAL semester hours in curriculum		126

HOME MAKERS MAJORS

JUNIOR YEAR	Semester Hours	
Economics 505	3	
Sociology 505	3	
Home Economics 505: Dietetics	3	
Home Economics 614: Child Development	3	
Home Economics 618: Home Furnishing	3	
Home Economics 650: Home Management	1	
Psychology 501	3	
Physical Education: First Aid	1	
Foreign language	6	
Elective	3	
Home Economics (elective)	3	
Total semester hours		32

SENIOR YEAR	Semester Hours	
Home Economics 750	4	
History or Political Science	3	
Electives	26	
Total semester hours		33
TOTAL semester hours in curriculum		128

HOME ECONOMICS TEACHER-TRAINING CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402: Freshman Composition	6	
Chemistry 407, 408 or 401, 402: General Chemistry	8	
Mathematics 405 (second semester)	3	
Art 401, 475: Art Structure	4	
Home Economics 401: Textiles	3	
Home Economics 402: Clothing Construction	3	
Physical Education (any two from 412-417)	2	
Freshman Orientation	1	
Total semester hours		30

SOPHOMORE YEAR	Semester Hours	
Speech 410	3	
Mathematics 406 (first semester)	3	
Zoology 401: General Zoology	4	
Chemistry 520: Organic	4	
Psycology 501, 504: General and Education	6	
Home Economics 405-406: Food Preparation and Meal Service	6	
Home Economics 505: Dietetics	3	
Home Economics 514: Family Clothing	3	
Physical Education: One from 530, 540, 545,560; one from 570-582	2	
Total semester hours		34

JUNIOR YEAR	Semester Hours	
Education 605: Secondary Education	3	
Botany 403: Bacteriology	3	
Economics 505	3	
Sociology 505	3	
Home Economics 609: Experimental Cookery	3	
Home Economics 610: Costume Design and Advanced Clothing Construction	3	
Home Economics 614: Child Development	3	
Home Economics 618: Home Building and Furnishing	3	
Home Economics 650: Home Management	1	
English 501, 502: English and American Literature	6	
Physical Education 621: First Aid	1	
Total semester hours		32

SENIOR YEAR	Semester Hours	
Political Science (American)	3	
History (American)	3	
Home Economics 655: Home Economics Methods	3	
Education 708: Home Economics Practice Teaching	4	
Home Economics 667: Advanced Nutrition	3	
Home Economics 668: Physiological Chemistry	3	
Home Economics 709: Demonstration in Home Economics (Education)	2	
Home Economics 750: Home Management Residence	4	
Biology 625 or 620	3	
Electives	3	
Physical Education 500	3	
Total semester hours		34
TOTAL semester hours in curriculum		130

INSTITUTIONAL MANAGEMENT MAJORS CURRICULUM

FRESHMAN YEAR	Semester Hours	
English 401, 402: Freshman Composition	6	
Chemistry 407, 408, or 401, 402: General Chemistry	8	
Mathematics 405 (second semester)	3	
Art 401, 475: Art Structure	4	
Home Economics 405: Foods	3	
Home Economics 406: Meal Planning	3	
Physical Education (any two from 412-417)	2	
Fresman Orientation	1	
Total semester hours		30

SOPHOMORE YEAR	Semester Hours	
Speech 410	3	
Zoology 401: General Zoology	4	
Chemistry 520: Organic	4	
English 501, 502: English and American Literature	6	
Home Economics 401, 402: Textiles and Clothing	6	
Home Economics 505: Dietetics	3	
Botany 403: Bacteriology	3	
Physical Education: one from 540, 540, 545, 560; one from 570-582	2	
Total semester hours		31

JUNIOR YEAR	Semester Hours	
Psychology 501, 504	6	
Economics 505	3	
Home Economics 650: Home Management	1	
Home Economics 609: Experimental Cookery	3	
Home Economics 614: Child Development	3	
Biology 620, 625	6	
Home Economics 760: Quantity Cookery	4	
Elective	2	
Total semester hours		34

SENIOR YEAR	Semester Hours	
Home Economics 614: Child Development	3	
Home Economics 667: Chemistry of Food and Nutrition	3	
Home Economics 668: Physiological Chemistry	3	
Home Economics 750: Home Management	4	
Home Economics 761: Institution Administration	5	
Home Economics 762: Food Cost Accounting	3	
Electives	10	
Total semester hours		34
TOTAL semester hours in curriculum		129

DESCRIPTION OF COURSES

TEXTILES, CLOTHING AND RELATED ART

HOME ECONOMICS 401: *Textiles.* Three lecture hours.

A practical study of fibers and fabrics designed to make the consumer more discriminating in her selection of textiles for clothing and for the home. Selection and care of fabrics.

HOME ECONOMICS 402: *Clothing.* Three hours. Four laboratory hours, one lecture hour. Prerequisite, Art 401.

A study of commercial patterns and fundamental principles of construction and fitting.

HOME ECONOMICS 514: *Family Clothing.* Three hours. Prerequisite, Art 475, Clothing 402. Four laboratory hours, one lecture hour.

Selection and construction of clothing for children at different age levels. Emphasis placed on designing clothing suited to the needs of children. Renovation, care and repair of clothing. Unusual fitting problems. Opportunity is given those who plan to teach to make illustrative material for special construction problems.

HOME ECONOMICS 610: *Advanced Clothing.* Three hours. Prerequisites, Art 475, Home Economics 514. Four laboratory, one lecture hour.

Techniques in tailoring and handling better dress materials. Choosing costumes for various types of individuals is stressed in this course. The influence of historic cosume on design is considered.

HOME ECONOMICS 710: *Dress Design and Pattern Construction.* Three hours. Prerequisites, Art 475, Home Economics 514. Four laboratory hours, one lecture hour.

Problems in creating designs through draping and flat pattern making.

FOODS AND NUTRITION

HOME ECONOMICS 405: *Food Study and Preparation.* Three hours. Four laboratory hours, one lecture hour.

Selection and preparation of foods with emphasis upon cookery processes.

HOME ECONOMICS 406: *Meal Planning and Table Service.* Three hours. Six laboratory hours, one lecture hour.

The planning, preparation and serving of meals for the family.

HOME ECONOMICS 505: *Dietetics.* Three hours. Prerequisite, Home Economics 405, Chemistry 407. One lecture hour, four laboratory hours.

The practical application of the principles of nutrition to the planning of diets for various ages and conditions; the prevention and dietetic treatment of deficiency diseases.

HOME ECONOMICS 605: *Nutrition and Diet Therapy.* Two hours. Prerequisite, Home Economics 405 and 505. Two lectures per week.

A study of the principles of dietetics and their application to special diets for different diseases.

HOME ECONOMICS 609: *Experimental Cookery.* Three hours. Prerequisites, Chemistry 520, Home Economics 405, 406. One lecture, four laboratory hours per week.

A scientific investigation of the principles and practices of cookery.

HOME ECONOMICS 667: *Advanced Nutrition.* Three hours. Prerequisites, Home Economics 505 and Chemistry 520. Three lectures per week.

A study of the foodstuffs, their properties, digestion and metabolism.

HOME ECONOMICS 668: *Physiological and Food Chemistry.* Three hours. Prerequisites, Home Economics 505 and Chemistry 520. Two lecture, two laboratory hours per week.

Experiments on the carbohydrates, lipins and proteins, digestive processes, blood, and urine.

CHILD DEVELOPMENT AND HOME MANAGEMENT

HOME ECONOMICS 614: *Child Development.* Three hours. Prerequisite, Home Economics 505. Two lectures, two laboratory hours per week.

A study of the physical, mental, social, and emotional life and constructive entertainment and play life of the child, including development of the infant and young child with emphasis on toys, stories, and play equipment.

HOME ECONOMICS 615: *Nursery School Administration.* Three hours. Prerequisite, Home Economics 614. Four laboratory hours and one lecture hour per week.

The planning and organization of different types of nursery schools and special training of teachers for nursery school work.

HOME ECONOMICS 616: *Nursery School Participation.* Two or three hours. Four or six laboratory hours. Assistant teaching in nursery school including conferences with director.

HOME ECONOMICS 618: *Home Building and Furnishing.* Three hours. Prerequisite, Art 401. Two lecture hours, four laboratory hours, per week.

A study of the principles which underlie the creation of artistic homes, harmonious house furnishings, period furniture, wall decoration and draperies, studies in planning home surroundings.

HOME ECONOMICS 650: *Home Management (a).* One hour. Prerequisite, all freshmen and sophomore home economics courses. Two lectures per week for nine weeks.

The economics of the household; its administration and finance.

HOME ECONOMICS 750: *Home Mangament (b).* Four

semester hours. Prerequisite, Home Economics 650 and permission of instructor.

A term of residence in the home management house in which all the activities of the home are conducted by the student under the direction of the teacher in charge.

HOME EONOMICS EDUCATION

HOME ECONOMICS (EDUCATION) 655: *Home Economics Methods.* Three hours. Prerequisite, Home Economics 609, Education 605.

An application of the principles of psychology and sociology in the study of the organization and methods of teaching home economics in high school.

HOME ECONOMICS (EDUCATION) 708: *Practice Teaching.* Prerequisite, Home Economics 655. Four hours.

HOME ECONOMICS (EDUCATION) 709: Two hours. Four laboratory hours per week. Prerequisite, senior standing.

The principles and practice of demonstration used in the teaching of home economics, in home demonstration works, and in business. Also a content course in all fields involved.

INSTITUTIONAL MANAGEMENT

HOME ECONOMICS 760: *Quantity Cookery. Four* hours. Prerequisite, Home Economics 609. (May parallel 609 and 760)

This course gives experience in large quantity food preparation and service, menu planning and methods of purchasing for institutions.

HOME ECONOMICS 761: *Institutional Administration.* Five hours. Prerequisite, Home Economics 760. Three lecture, four laboratory hours per week.

Principles of organization and management as applied to institutional administration. Selection, arrangement, and care of institutional equipment, study of personnel management, business organization, record keeping, and food-cost accounting.

HOME ECONOMICS 762: *Food-Cost Accounting.* Three hours.

HOME ECONOMICS 763: *Lunch Room Management.* Three hours. One lecture, four laboratory hours per week.

This course gives practical experience in the management of the small lunch room.

FOR OTHER THAN HOME ECONOMICS STUDENTS

HOME ECONOMICS 501: *Nutrition and Physiology.* Three hours.

A study of nutrition and physiology with special emphasis on phys-

ical fitness. This course is planned for physical education majors, but all students except home economics majors may enroll.

HOME ECONOMICS 402, 405, 406, 501, and 614 are open to non-majors.

HOME ECONOMICS 402: *Clothing Construction.* No prerequisite for non-majors.

HOME ECONOMICS 405: *Food Preparation.* No prerequisite for non-majors.

HOME ECONOMICS 406: *Meal Planning.* Prerequisite, Home Economics 405.

HOME ECONOMICS 501: *Nutrition.* No prerequisite.

HOME ECONOMICS 614: *Child Development.* Prerequisite, Psychology 501.

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